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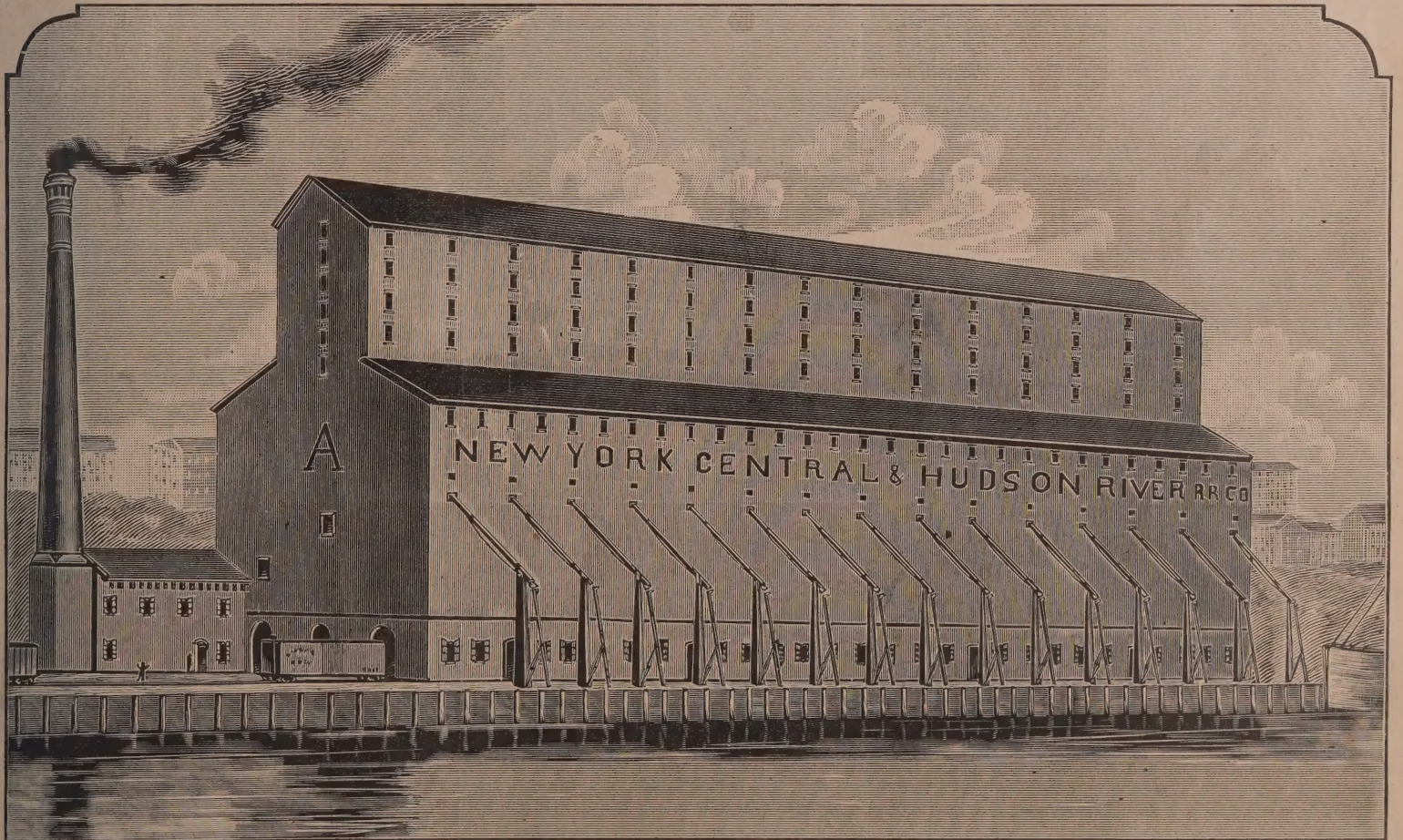
NEW ELEVATOR AT NEW YORK CITY.

In April, 1889, the New York Central & Hudson River Railroad Company's elevators, known as "A" and "B," situated on the North River, between Sixtieth and Sixty-fifth streets, in New York City, were destroyed by a fire

The illustration given herewith represents the new Elevator "A." Profiting by the experience of the late conflagration, and in conformity with the strict regulations of the building and fire departments of New York City, the new structure has been designed and built to successfully withstand the attack of fire originating from without. The entire exterior construction, including all roofs,

with their bumpers. A tower inclosing a marine leg, used in the unloading of canal boats, is also annexed to the south end of the building, and built entirely of fire-proof material.

The power plant of 900-horse power is located in a separate fireproof building at the northeast corner of the elevator. The engine is a vertical condensing engine of



THE NEW YORK CENTRAL & HUDSON RIVER R. R. CO.'S NEW ELEVATOR AT NEW YORK CITY.

originating in a mammoth lard rendering and storage establishment. While the ruins of their elevators were yet smouldering, the railroad company decided to rebuild Elevator "A" upon the former site, and secure the remainder of their elevator facilities at Weehawken, immediately opposite, in New Jersey, where the terminal point of the West Shore Railroad, now operated under lease by the N. Y. C. & H. R. R. R. Co., is located.

is of incombustible material, mainly of iron protected by hollow tile.

The main building is 100 feet and 8 inches wide by 355 feet and 6 inches long, with an average depth of storage bins of 65 feet, making a net storage capacity of 1,500,000 bushels. At the south end of the building the first story is extended 16 feet for a width of 70 feet, for proper inclosure of the railroad tracks entering the building,

the Corliss type, 52x42. Three tubular steel boilers, 6 feet diameter by 16 feet long, furnish the steam, and are connected to a brick chimney 15 feet square, which towers to the height of 160 feet.

The elevator and its annex rest upon a substantial foundation of dimension granite masonry, supported in turn by piles capped with heavy timber below low water mark.

The first story of elevator is constructed of substantial

timber in the usual style of elevator construction. The bins are formed by partitions of surfaced spruce plank, mostly 12x14 feet in area. Along the east side of the building these bins are divided into three, and a bagging floor is constructed below this tier of bins, extending the entire length of the elevator, and containing scales, sacking apparatus, etc., thus furnishing excellent facilities for the delivery of either bulk or sacked grain to wagons for city consumption.

The cupola is a composite construction of wood, iron and hollow tile. The posts are of iron, and extend from the granite piers of the foundation to the roof, thus insuring an absolute and unchangeable level for the scales, machinery and other appliances located in the cupola, regardless of the customary settlement and variations of the bin walls.

The engine and boiler house is a brick structure, 34x60, with iron trussed roof, filled in between the iron purlins with fire clay tile, and the whole covered with roofing. The first story of elevator proper is inclosed with a brick wall 16 feet thick, capped with stone belt course, above which the inclosing wall is built of fire clay hollow tile, suitably anchored to the bin walls, to provide for the usual settlement of the plank bin walls. The roofs and exterior walls of the cupola are built entirely of iron and hollow tile. All openings are protected by metal shutters, so that no combustible material is to be found in the outside exposure.

In no elevator building heretofore constructed has the use of hollow tile been so generally introduced as in Elevator "A."

The equipment of Elevator "A" consists of ten receiving elevators, located between two tracks extending through the elevator, with a line of power shovel machinery between; nine shipping and transfer elevators, and the marine elevator heretofore mentioned. The elevators have a capacity of elevating 7,500 bushels per hour, and 400 cars per day is the ordinary day's work of receiving grain. Fifteen iron shipping spouts, supported on iron trestles, with adjustment gearing connected therewith, are used for the loading of grain to boats, which can readily be transacted at the rate of 65,000 bushels per hour. The belting used in the elevator is of the best made. The main driving belt is 52 inches wide and 8-ply. Nineteen scales of 1,000 bushels' capacity are required for weighing the grain received and shipped through the elevator. Several new features have been introduced in the construction of the operating machinery, designed by Mr. Geo. M. Moulton.

The appointments and construction of the elevator are first class and most thorough in every respect, the railroad company, through its chief engineer, Mr. Walter Katte, having instructed the architects and superintendents, Messrs. J. T. Moulton & Son of Chicago, to combine the best results of their knowledge and experience in the structure, to the end that Elevator "A" might be equal to the best. The estimated cost of Elevator "A" complete is \$500,000. It will be in readiness for the transaction of business about Aug. 1, 1890.

The elevator for the West Shore Railroad at Weehawken, above referred to, is also now in course of construction, under contract by Messrs. J. T. Moulton & Son, to be completed about Dec. 1, 1890, and a description in detail of this structure is promised at some future date.

A WILD AND VISIONARY SCHEME.

Mr. Livermore, the national lecturer for the "Farmers' Alliance," made an argument before the Ways and Means Committee of the United States House of Representatives in favor of Government sub-treasuries for the farmers' grain. We have seen nothing in our time quite so impracticable and absurd as this proposition, for the reasons:

First—That in all directions—along all the railway and water lines—there are now such warehouses or elevators for receiving the farmers' grain, and more of them can be supported in the legitimate transaction of business.

Second—The owners of these elevators are always ready to take into store the farmers' grain and hold it for him until he wishes to sell it, and advance him a fair proportion of its value at fair rates of interest. Ample competition secures all this.

Third—It is well known that neither corn, wheat nor oats can be kept in store without great depreciation in value, unless frequently exposed to the air by re-elevating and handling. It would entail a great loss on the Government to store the farmers' grain and become responsible for its conditions.—*Toledo Market Report.*

THE CORN EXHIBIT AT EDINBURGH.

The Edinburgh *Scottish Leader*, May 7, gives a lengthy and enthusiastic account of the American Indian corn exhibit at the Exposition in that city. Colonel Murphy, who has the exhibit in charge, is not only showing the Scotchmen the different varieties of corn produced in the United States, and explaining to them the immensity of the crop and its remarkable cheapness, but he is teaching them its manifold uses in the production of starch, glucose, oil, whiskey, etc. "This is the first time," says the *Leader*, "that the people of Scotland have been taught how to cook maize; and, no doubt, many after seeing and tasting the numerous excellent qualities of that form of food will wonder why they have so long been kept in ignorance of them." At the risk of having its patriotism impeached the *Leader* declares "that Indian corn bread is pleasant to the taste and lighter than oatmeal," and that "if people are once acquainted with the really wholesome and nutritious food that can be made from this corn it is thought that exportation may prevent the waste in America."

Colonel Murphy has had printed fifty different ways of making appetizing and nutritious dishes from cornmeal. If he should prevail upon the people of Great Britain to learn how to properly prepare corn for the table all the rest would be easy. They would find that it is as good food for men and women as for horses and oxen. And what a blessing cheaper bread would be to the very poor!

INDIA'S WHEAT EXPORTS WILL DECREASE.

Mr. I. L. Hauser, an American by birth, but a resident of India for the last twenty-nine years, said recently, while on a visit with relatives at Minneapolis, that India's influence in the wheat markets of the world was on the decline. He has given much thought and attention to the culture of wheat in India.

Mr. Hauser says Indian wheat can never be a formidable rival of the American cereal in any of the great markets of the world. True, considerable quantities are exported at the present time, but he can see no reason to suppose that the amount will ever be much greater than it is to day; on the contrary, he believes that the present amount will be largely reduced in time.

The Indian wheat contains a much larger percentage of starch than the American article, and from that fact makes a poorer quality of flour for the ordinary purposes. It is used quite extensively, however, in the manufacture of macaroni, for which it is admirably adapted by reason of its richness in starch. For other purposes it is mixed with the American wheat in the process of grinding. The increase of home consumption, Mr. Hauser argues, will more than keep pace with the increase in the production. As a general thing the natives use little or no flour. It is too expensive food. They have to sell every kernel, and be content with a much cheaper article of diet for themselves.

But with the increase in manufactories, the opening of the rivers, and the great advance in all kinds of industrial labor in India, the condition of the natives is going to gradually become better. With the change of occupation, requiring a greater outlay of strength and brawn, both the quantity and quality of the natives' sustenance will have to be changed very materially, and wheat flour, he thinks, will become in time the most important factor in the regulation diet of the people. From this and other kindred facts he argues that the exports of the cereal will rather be diminished than increased in the years to come.

The crude system of cultivation has always been used as an explanation of the terrible poverty of the people there. Again Mr. Hauser says not so. The Indian people do indeed grow their grain just as their ancestors did a thousand years ago, but he claims it can never be any different, and moreover, that it is better so. In the first place, labor is so cheap that there is no economy in improved machinery or methods. Each person cultivates from one-eighth of an acre to an acre or thereabouts.

Under such circumstances there would be little need indeed of a modern harvester or a gang plow, or any of the other necessary adjuncts to bonanza farming in Minnesota or the Dakotas. All their farming operations are conducted on an exceedingly small scale. The plowing of the little parcel of land is a job of several weeks. It is done during the rainy season, which commences along in midsummer and lasts till the autumn. The plows con-

sist of a small beam with one handle and a little wooden appendage underneath, which answers to the plowshare. It doesn't turn a furrow, but only roots up the ground to the depth of an inch or so. The plow is drawn by a pair of diminutive oxen no larger than the average ye rings, and possessing not half their strength.

MEXICO A GRAIN EXPORTER.

Another large grain field, large enough to affect the supply and consumption of the world, and to enter into a serious competition with the United States and Russia, according to the *Millers' Review*, now looms into sight. It is Mexico, and it comes to the front as part of the great commercial and industrial reconstruction of that land by the American railways. The physical formation of Mexico is simply an extension southward of the great Colorado mountain plateau. Wheat grows on the plateau of Mexico at from 6,000 to 9,000 feet above sea level, and between the eighteenth and twenty-fourth parallels of latitude. Corn grows everywhere, except on certain waste districts along the northern frontier, where the soil is the same as the alkali plains of Arizona and New Mexico. The wheat growing area of Mexico, par excellence, extends from Pueblo to Colima, about 500 miles east and west, and from Southern Mithoacan to Zacatecas, about 400 miles north and south. The plateau is broken by mountain ranges into a number of rich districts, especially adapted for the growing of wheat, namely: The Lerma valley roughly 200x16 miles; the Bajio, Jalisco 200x200 miles; Aguas-Calientes 50x50 miles; the Lau Luis, Potosi and Oueretaro district, 150x30 miles; total, say 52,000 square miles. Of this immense field of rich and arable land, one-third it is believed could be readily put into wheat with due regard to the other agricultural interests of the country.

Under the Mexican plan of cultivation three crops are taken off the land every two years—one crop of wheat and two crops of maize. The average wheat yield of Mexico does not much exceed twenty bushels to the acre. Corn on irrigated lands runs about fifty; on dry land about thirty bushels to the acre. The mode of cultivation is similar to that of the Egyptians thousands of years ago. Wooden beam plows are mostly used, with a small iron share, which scratches a furrow four inches wide by four deep. Five men are used, and five yoke of oxen, where one would be needed in the European countries. Nevertheless the wheat raised is of the very finest quality. Apart from the 52,000 square miles spoken of above, which is the choice wheat producing area, there is sufficient outlying wheat, barley and corn land now under actual cultivation to supply the present population of Mexico. These people are at present fed on grain raised just where they live, there having been up to this time very few organized machines for the transportation of the products from one part of the country to the other. Mexico is substantially a corn-fed nation, seven-eighths or more of the people living habitually on tortillas.

It is, of course, impossible to forecast fully and accurately the commercial results which will be realized in Mexico from the completion of the different railroads now in the process of construction and designed to be feeders to the one which connects the United States with that country; but that a great change is at hand is obvious from the fact that Mexico will, within the space of the next few years, pass from conditions which gave character and direction to commerce and industry 300 years ago, to conditions which govern trade in the more advanced nations at the present day. The transformation will probably be one of the most marked within the annals of history.

MIDNIGHT QUARREL IN AN ELEVATOR.

"I may be a scale," said the first weighing machine, "but I'm above the sink."

"I may be a little below the scale," said the sink, "but I'm not pushing and twisting about it all the while."

"I may be all the while pushing and twisting," said the conveyor, "but I'm on the way to elevation just the same."

"There is very little satisfaction in getting up in this world, boys!" said the elevator. "My life is made up of ups and downs, and I'm on top only half the time."

"That's the way you got me up here," said the wheat, "but there's nothing in it! for dressed and polished as I may be in my exalted position, I'll soon be down again, and all broke up!"—*St. Louis Miller.*

THE MONITOR DUSTLESS OAT CLIPPER AND SEPARATOR.

The clipping of oats is an industry that has for the last year or two assumed proportions of considerable magnitude. Large sums of money have been realized from this process, and the demand for clipped oats is on the increase. The average elevator men now consider an oat clipper an essential feature of a well-equipped house. We illustrate herewith a machine designed for this purpose and called the Monitor Dustless Oat Clipper and Separator. The fact that it is manufactured by that well-known and enterprising firm, Messrs. Huntley, Cranson & Hammond, Silver Creek, N. Y., whose reputation as manufacturers of grain-cleaning machinery extends throughout the world, is pretty fair evidence that the machine is a good one, and has come to stay. As we have not yet received the cuts showing details of construction and methods of operation, we are forced to defer until a future edition a more extended description. Sufficient to say that the manufacturers make strong claims for the machine, and statements are now before us from several, whose seal of approval at once stamps a machine standard, that the Monitor is fully all claimed for it. Messrs. Huntley, Cranson & Hammond will take pleasure in giving full particulars to any who may apply. The same may be obtained by addressing B. F. RYER, 63-65 South Canal St., Chicago, Ill., manager of this firm's Western branch. Interested parties visiting Chicago would do well to call at latter place and carefully examine the machines, a full line of which is carried in stock for exhibition and quick shipment.

UNDERBILLING GRAIN.

It seems that the old trick of billing cars of grain under their actual weight, says the *Winnipeg Commercial*, has had a little revival on the Canadian trunk roads of late, and to counteract this dishonest practice, the managers of these roads are disposed to take a rather high-handed course. Mr. George Olds, general traffic manager of the C. P. R., forwarded the following communication to the president of the Montreal Corn Exchange, and as might be expected it has caused some stir in grain circles:

"I beg to advise you that, owing to complaints received from honest grain shippers in Ontario, and the undoubted fact that frequent and extensive frauds have been practiced upon us by shippers underbilling weights, we have found it necessary to issue instructions to our agents to refuse to accept any more grain in bulk for track delivery. Hereafter all grain will be sent through our elevator. We have discovered that a great many shippers are in the habit of returning weights of from twenty-five to thirty-three per cent. less than the actual amount loaded in the cars, and it is impossible for us to check these in any other way than that above indicated."

At a meeting of the same Exchange the action of Mr. Olds was discussed with a little acrimony, one prominent member, who is noted for his outspoken honesty, expressing his fear that, as the new arrangement would be practically a tax of half a cent a bushel on all grain shipments to Montreal, it was being enforced to improve the earning power of railway elevator property as much as for the purpose of detecting dishonest shippers. The same member also hinted that the underbilling fraud might result as much from the private hints of railway agents that the practice would be winked at, as from actual dishonesty on the part of the shippers, competition for freight being now as keen, that with fixed rates of freight other underhand methods of securing business was very likely to be brought into play.

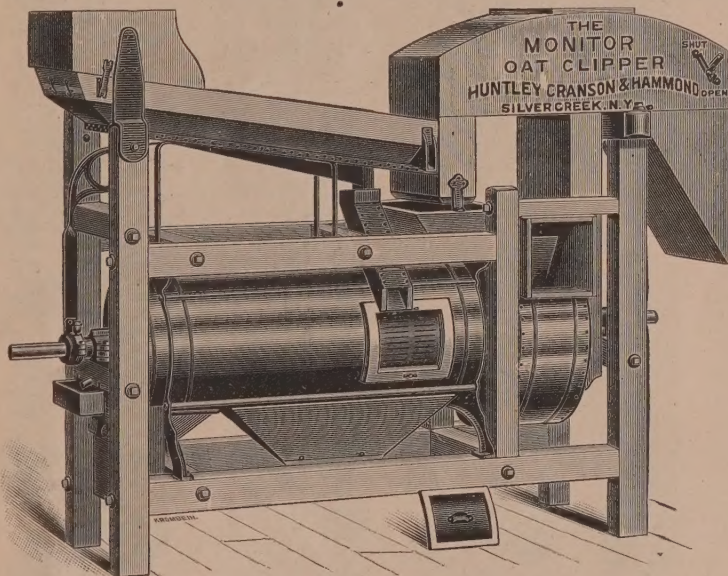
It is to be regretted that the C. P. R. management should consider it necessary to adopt the arbitrary course they have taken in order to stop this dishonest practice, but at the same time they are credited for being honest in their aim. If some of their agents at outside points gave the hints about underbilling being a practice to be winked at, they no doubt did so without authority, and it would be unfair to hold the management of the road responsible for such hints. The course they have adopted, arbitrary though it be, carries with it the appearance of good faith, for if competition be so close as to require underhand

work, an obnoxious course such as is outlined in the letter of Mr. Olds is likely to be a means of cutting off patronage from some shippers.

It does seem as if the checking, which the railway could secure by the use of their track scales at central points, should be sufficient to put a stop to this practice, without having to resort to the extreme course suggested by the general traffic manager. When shippers attempt a fraud so great as billing cars of grain at from two thirds to three-fourths of their actual contents, it is high time that the railway company should take steps to protect honest shippers as well as themselves. It is to be hoped, however, that they will be able to devise means for the frustration of the dishonesty without adding an elevator charge, which would certainly be an addition to the expense of grain transportation.

TARIFF CHANGES.

The McKinley tariff bill, which bids fair to become a law, provides for the following changes which will directly or indirectly affect the grain trade. The duty on barley is advanced from 10 to 30 cents per bushel; on barley malt, from 20 to 45 cents per bushel; on pearled barley it is to remain the same as at present, $\frac{1}{2}$ cent per pound; on buckwheat, oats and corn the duty is advanced from 10 to 15 cents per bushel; on cornmeal, 10 to 20 cents a bushel; on rice, cleaned, it is reduced from $2\frac{1}{4}$ to 2 cents



THE MONITOR DUSTLESS OAT CLIPPER AND SEPARATOR.

per pound; on rice uncleaned, flour and meal, the duty is reduced from $1\frac{1}{2}$ to $1\frac{1}{4}$ cents per pound; on rice paddy the duty is reduced from $1\frac{1}{4}$ to $\frac{3}{4}$ cents per pound; and on broken rice, from 20 per cent. ad valorem to $\frac{1}{2}$ cent per pound.

The duty on rye and rye flour remains the same, 10 cents a bushel and $\frac{1}{2}$ cent a pound. On wheat the duty is advanced from 20 to 25 cents per pound, and on wheat flour from 20 per cent. ad valorem to 25 per cent. Broom corn, which has been admitted free of duty, is by the McKinley Bill subjected to a duty of \$8 per ton. The duty on hay is advanced from \$2 to \$4 per ton. On flaxseed and other oil seeds it is advanced from 20 to 30 cents per bushel. Straw, which has been admitted free, is subject to a duty of \$2 per ton. Flax straw remains the same, \$5 per ton. Flax not dressed or hackled is advanced from \$20 to \$30 per ton. Flax hackled is advanced from \$40 to \$80 per ton. Tow of flax or hemp is advanced from \$10 to \$25 per ton. The duty on hemp remains the same, being \$25 per ton.

During the first five months of 1890 the receipts of flaxseed at Chicago were 542,500 bushels, against 201,000 bushels for the same period of 1889. The shipments for the first five months amounted to 654,594 bushels, against 432,305 bushels for the same period of 1889.

The Minnesota grain inspectors seem to be of the opinion that North Dakota will not be able to inspect her own grain for awhile yet. They claim it will cost \$8,000 to get four inspectors established. But beyond that it is flatly given out that no North Dakota inspection will be recognized in Minnesota—*Jamestown Alert*.

OBJECTS TO COMPULSORY ELEVATOR SERVICE.

A meeting of the Montreal Corn Exchange was held recently to consider the announcement made by the G. T. R. R. and C. P. R. R. that the practice of underbilling was prevalent, and that in consequence the companies would hereafter weigh out into the elevators all grain for delivery in Montreal. That underbilling has been practiced is not denied. It was even allowed that it has prevailed so widely as to have become almost a general custom, except among the most strictly honorable firms. There has been less of it in regard to grain shipping to Montreal, where the grain always stood a chance of being weighed out, than to way stations, where there was no means of weighing it out or checking the weights. Cars whose capacity was 26,000 pounds have been almost habitually loaded up to 30,000 and 32,000 pounds for shipment between one way station and another, and the weigh bill made out for only 26,000 pounds. It is reported that in some special cases tested, from 10,000 to 15,000 pounds over the billed weight has been weighed out of cars. It is said that some of the middlemen or brokers have made their profits on Canadian business solely out of the underbilling. One grain merchant in a Western city is said to have put up a fine house from his profits in a single year from this practice. Of course honest merchants have been unable to compete with such men, and although the practice has extended over years, certain honest firms were quite unaware of its existence until within a year past. It is owing partly to their action that this outcry has been raised. The practice is of course condemned as an evil by the members of the Corn Exchange, who are anxious to see it wiped out. They do not want their business spoiled in the operation, however. They want to know how it is possible that cars have been habitually underbilled, and in some cases to such an extraordinary degree, without the practice having long ago become known to the companies, and they would like to know also what instructions in regard to underbilling were issued by the companies to the agents at way stations. The suspicion is that the practice of underbilling was winked at, if not openly suggested, by the companies themselves, in order to get freight without cutting rates, as agreed upon with one another. The grain shippers demand that if the grain is weighed out at Montreal it shall also be weighed out at other stations, so as to prevent this point being handicapped by underbilling to way stations. The trouble

about this is that no means exist for weighing out at small stations, and track scales are not generally accurate for light and heavy weights both. The suggestion is made that the companies' agents should check the weighing in of the grain. The grain dealers on 'Change demand as a legal right the delivery of grain from the car on the track within twenty-four hours, and the right to forty-eight hours' storage at a quarter of a cent. These demands were formulated in a resolution by the meeting, and it was decided to send a deputation with them to the railway companies.

MONTREAL GRAIN MEN GLOOMY.

A reporter recently interviewed a number of Montreal grain shippers as to the prospects of grain shipments. They all take a gloomy view of the situation. One shipper, after pointing out that Montreal had lost her position as a grain shipping port, said: "What we need is free trade, and until we get it we must expect our grain men to gradually go to the wall." Another shipper said: "The outlook is anything but bright." The head of a large shipping firm said there was no Canadian wheat being shipped. It was all American. A fourth shipper said: "Never in the history of Canada has the outlook been so gloomy. Montreal should be one of the finest shipping ports on this side the ocean, yet, thanks to the fact that we are not a free trade country, Montreal is fast losing ground. It may not seem right for a citizen of Montreal to talk this way, yet it is the truth, and sooner or later it must be known. As things stand now the American has every advantage over us, and what the end will be God only knows."

SCIENTIFIC SEEDING.

BY O. P. HURFORD.

There seems to be a universal demand for cheapness in every department of human industry. The tendency is to lower prices everywhere, and owing to the control that man has obtained over the elements and forces of nature, this has been rendered not only possible but feasible in the mining and mechanical arts, and to a certain extent in agriculture, but not equally so, owing, it would seem, to a lack of that thorough understanding of the art which prevails in other industries. The study with the miner and manufacturer is to cheapen their products, and the time is at hand when the American farmer will have to do the same with all his might. There is said to be an over-production of food in the world, and in the general competition for trade the country that can produce food cheapest will hold the markets. The vast wheat fields of India and Russia, with ever increasing facilities for transportation, wear a more threatening aspect to the American grain trade than they ever did before. It is becoming then more and more a matter of vital importance with the American farmer to cheapen his products, an art about which American farmers as a class have much yet to learn. It is not the intention to go into the discussion of this subject in all its details, but there is one branch of it, that which relates to seed wheat, I will endeavor briefly to discuss.

It has been remarked that while volumes have been dedicated to the study of the soil, and volumes written about its fertilization, the seed to be used in the reproduction of grain has been treated as a mere accessory or secondary matter, while it is in fact of equal if not paramount importance. The neglect of this important factor in grain farming prevails to a greater extent than would be supposed by persons unfamiliar with the fact. A person who has lived for any considerable length of time in intimate relations with the farming community will be able to state, from personal observation, that this whole subject of seeds is one upon which they make frequent and fatal mistakes.

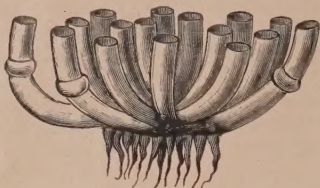
When it is desired to emphasize a lesson that we wish to teach, example is better than precept, and therefore to show what may be accomplished by the careful selection of seed wheat I give an illustration in the AMERICAN ELEVATOR AND GRAIN TRADE, showing what was accomplished by Mr. Hallett on his farm near Brighton in England.

At the same price per bushel wheat is cheapened if its flour-producing qualities are increased, and its price per bushel, all things being equal, will be reduced if in the cultivation of wheat for seed its tillering powers are enlarged. What we mean by "tillering" is shown in cut No. 1. It means the power of a single grain of wheat to multiply stalks, each producing a head of wheat. Our illustration shows a bunch of sixteen stalks of wheat growing from one grain.

There is something curious about the inherent power of a single grain of wheat, under cultivation, to multiply itself. An Irishman by the name of Miller, a few years ago planted a single grain of wheat in June, and when it came up and branched out he took up the bunch, separated the tillers, and replanted them, and as each stalk grew and threw out additional tillers, he separated and replanted them as before, repeating the operation until in the following year at harvest he had from this one grain of wheat 21,103 heads, containing 576,840 grains. Such instances as this and others that might be mentioned, show the vast possibilities for reproduction that are contained in a single grain of wheat.

In our cut No. 2 we have, as before stated, an illustration of what Mr. Hallett accomplished by his method of selecting seed wheat. Mr. H., in the exercise of good, sound judgment, observing that from the largest and best

animals the best stock is raised, conceived the idea that the same principle might be applied to grain. He discovered that in every ear of wheat there is one best grain, which was found to excel all others in productive powers. Then he discovered that in a bunch of wheat or tillers sprung from a single grain of wheat there is one best head. From these best ears and best grains he selected



CUT 1.



FIG. 1.



FIG. 2.



FIG. 3.



FIG. 4.

Fig. 4. This head was $8\frac{3}{4}$ inches long, contained 123 grains, and was taken from a bunch of 80 tillers or heads. It will be observed that this last head of wheat is just twice as long as the first one from which it sprung; contained nearly three times as many grains, and the bunch from which it was taken contained about five times as many tillers as did the original one. These illustrations were reproduced from photographs of the original wheat heads, and show the facts.

Persons who saw the results of Mr. Hallett's experiments, looked upon them as almost miraculous. In this connection I will quote a few remarks made by a gentleman who visited Mr. Hallett's farm. He says: "We have wandered on the sides of purling brooks, and seen the foamy sea in all its glory, but never do we recollect being more struck with admiration and even wonder, than when we beheld the fine crops of Mr. Hallett's cereals." * * * "But to return to the crops of wheat. It waved its perulous heads to the 'slight breeze which blew, each ear giving 'promise of great productiveness, and as far 'as the eye could reach over waving fields, 'each ear was of the same great and unusual 'length."

One great advantage of Mr. Hallett's method was the saving in seed grain. One peck of wheat was quite sufficient for one acre of ground seeded in this way.

The agricultural art seems to have passed through many changes and great vicissitudes. This large productiveness that Mr. Hallett obtained does not seem to have been a new thing under the sun. This great power of tillering was outstripped under the Caesars. Pliny tells us of a bunch of wheat containing 400 stalks, raised from one grain, that was presented to the Emperor Augustus, and of another containing 360 stalks that was offered to Nero; and this same Pliny tells us that in those days the yield of wheat was 300 bushels to one bushel of seed, or 300 to 1. It has been suggested that Pliny exaggerated a little in this statement, but that the yield of wheat per acre (*modii per jugerum*) was much greater during the palmy days of the Roman Empire than during its decline and fall there can be no doubt. From a yield of from 35 to 45 bushels per acre it had sunk toward the middle of the first century of the Christian era, to 15 or 16, and so it continued to decline through all the troublous times that followed, when the business of war retarded the development of the peaceful arts, and depressed and bestialized the tillers of the soil. This state of thing continued for ages, until in France the yield per acre had fallen to 8 bushels in A. D. 1700, and continued so until the beginning of the 19th century.

I take France, as an example for the purposes of this article, because I think she has kept the best record of her advancement in the agricultural art, and furnishes the best information with regard to that industry. After the peace of 1815 agriculture in France took a new start, and gradually improved with improved methods, until in 1864 the yield per acre had about tripled. It increased from 8 bushels to 23 and a fraction. I think the French agriculturist attaches more importance to the growth, selection and care of seed wheat than is generally done in any other country. They recommend seed farming as a profitable industry, and in all cases advise that seed wheat should be raised by every farmer on a separate piece or field of ground, carefully prepared for that purpose, not poor, and not too rich, and sown with seeds especially selected. Seed grain, they advise, should be allowed to ripen thoroughly before cutting, and harvested so as not to shatter out the grains in the operation. They select the tallest stalks and largest heads from the grain raised for seed. They pick out carefully all the short stalks with imperfect heads, and weeds, and thresh it by handfuls by striking it over a barrel or upon a table made especially for the purpose. Thus the largest and best

seeds and planted them year after year for five years. He began in 1857 by selecting seeds from an ear of wheat $4\frac{3}{4}$ inches long, shown in our cut No. 2, Fig. 1, and contained 47 grains. The result of this planting is shown in the head of wheat, Fig. 2 of our cut No. 2. From this head he selected seeds again and planted, and the result is shown in ear No. 3 of our illustration. From this one he selected and planted as before, and the result is shown in

grains are threshed out for seed, and the remainder goes into the general stock. Much attention is given to the changing of seed wheat from one locality to another, when necessity seems to require it, but it will be readily seen that this necessity will not exist to any great extent, where seed wheat is raised by itself, according to Mr. Hallett's method, or according to the plan that is generally adopted by French farmers. Seed wheat after threshing is to be kept in a cool, dry place. Heat and dampness readily impair its germinating quality, while it will stand almost any degree of cold.

The French farmer realizes that without a large yield to the acre he cannot possibly raise wheat profitably. He has therefore done his best to devise methods to attain that end, and with him suitable seed wheat is a matter of as much importance as the character of the soil he cultivates, and its fertilization. With the proper care for the seed to be sown, smutted wheat will be an impossibility. We often hear it stated among our farmers that such and such a desirable variety of wheat has "worn out" in certain localities where it once flourished. Without multiplying words upon this proposition, I will only add that such a thing would never occur with proper attention to the methods of raising and caring for the seed, as above stated. Any variety of wheat can be kept alive and vigorous generation after generation if the same care is bestowed upon it that the stock raiser gives to his horses, cattle and sheep.

BARNARD'S COMPENSATING SIDE SHAKE ELEVATOR SEPARATOR.

The machine illustrated herewith is offered to the public to meet the wishes of those who prefer a lateral or side shake to an end shake in a separator. It is the firm's latest improved separator for the use of elevators and warehouses, and in it the firm have embodied a number of good points which they are certain will be appreciated by the trade. Some of its special features are covered by a patent granted June 27, 1882, while others are covered by a patent still pending.

The machine has two separations by air, one before the screen and one after, and three screens and a sand or cockle screen in the shaker. The greatest improvement, however, is in making the shaker in two parts and using the double compensating shake motion, which moves one-half of the shaker in one direction while the other half is moving in the opposite direction, thus preventing all jar and causing it to run smooth and not shake itself to pieces, as in some machines. This is especially noticeable in machines of large capacity, where the shaker has to be large and carry a large amount of grain on it when in operation, which makes it so heavy that when run up to motion it is impossible to keep it from shaking itself to pieces in a few years' use, even when built extra strong and braced in the strongest manner; and also prevents their being located in a cupola, as it soon shakes it to pieces also. The manufacturers claim that with their double side shake, which they own and control exclusively, the machine requires but little bracing, can be located anywhere, and runs so smooth that it does much better work, especially in removing oats from spring wheat.

A new feature never before used in a separator is the use of conveyors in the screen boxes, which prevent choking, especially in the screen box of the first separation, which sometimes chokes by the accumulation of straws, etc. They also enable the manufacturers to reduce the height of the machine. Where the grain enters it is as much as twenty inches lower than other makes of like capacity, thus enabling them to spout to it from a larger number of bins. The grain is discharged from the end of the machine, which makes it more convenient to spout it into the elevators. It requires less room to locate it in the building than the end shake machines, which is quite an advantage. It is dustless, and will do its work in a superior manner. Two sets of sieves go with each machine, and parties ordering can choose any two sets required, and additional sizes wanted may be had at reasonable rates.

They make a set of coarse sieves and a set of medium sieves for wheat, which are most used by shippers. They

also make a set with fine holes for removing oats from spring wheat and doing fine work generally; also a set for barley, and one for corn and oats.

The machine is built in five sizes, with capacities ranging from 350 bushels per hour, with fine sieves on the smallest machine, to 3,000 bushels per hour with coarse sieves on the largest machine. The manufacturers, the BARNARD & LEAS MANUFACTURING COMPANY, Moline, Ill., will be pleased to give all desired additional particulars respecting this machine, its work, prices, etc.

COUNTRY GRADING.

"We have received a marked copy of a Minneapolis paper containing the following, from a correspondent at Fergus Falls, Minn., signing himself 'New Process':

"Since the enactment of the present grain and warehouse laws known as the 'terminal inspection laws,' which provide for the supervision of the public warehouses and the inspection of grain at St. Paul, Minneapolis and Duluth, there has been a tendency at times to criticize the utility of the law, on the ground that its op-

were copied largely from those of Illinois, and the framers of that law contemplated nothing further than inspection at its terminal point, Chicago. There is no authorized inspector of grain in this state outside of St. Paul, Minneapolis and Duluth, nor should there be. To handle and dispose of the immense volume of grain at terminal points necessitates some system of inspection and classification.

"In view of the impositions that were alleged as being practiced by the Board of Trade in this work, the act of March 1, 1888, was created, placing the work under state control. The intention of the law was to create an absolutely free and open market in the country, where grain would be bought not by grade but upon its merits, the only system by which the producer can secure proper justice. In no other grain-growing states is such an incubus as our country grading system fastened upon the people, and there never can be any peace or satisfaction until we return to the simpler, time-honored methods, when the interior markets of the state were open to all who desired to buy our products. What is wanted to relieve and protect those who cannot avail themselves of direct shipment is an open market, unfettered by any grading system which robs good wheat of its proper premium, and where all buyers will be placed upon a fair and equal footing, thus creating that healthful competition that will insure the producer a just return for his labors. If a remedy for existing evils is wanted, it can be found in this direction and in no other."

NEBRASKA AND IOWA CORN SUPPLY.

F. P. Arnold of Battle Creek, Madison county, on the Fremont, Elkhorn & Missouri Valley Railroad, says: "Three-fourths or more of the crop of corn raised last year in Madison county has been used or marketed, and all of the balance will be consumed at home. The range of prices this year has been 10@20 cents, while last year it was 14@35 cents."

Daniel Cahill of St. Edwards, Boone county, on the Union Pacific, says: "Nine-tenths of last year's crop raised in Boone county has been disposed of. There will be very little, if any, for shipment. The range of prices last year was 14@22 cents; this year the range has been 12½@22 cents. During periods in the winter we had lots of trouble in getting cars."

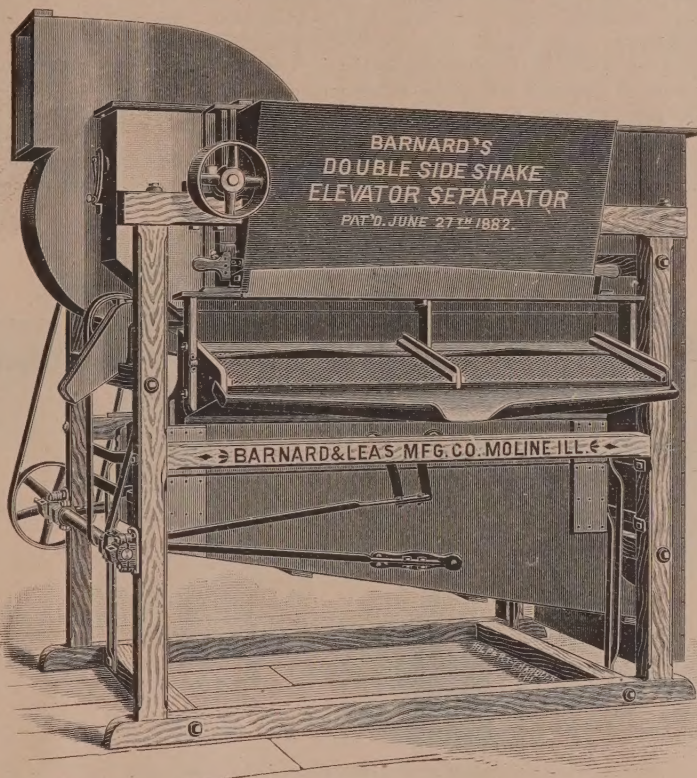
J. M. Lyons of Trenton, Hitchcock county, on the B. & M., says: "One-half of the corn raised last year in Hitchcock county has been shipped to market, and about one-third of the balance has been consumed at home.

Practically all of that remaining will be used at home. The range of prices last year was 14@25 cents, while this year it has been 14@30 cents."

Elisha Taylor of Broken Bow, on the B. & M., says: "Seventy-five per cent. of the corn raised last year in Custer county has been marketed, and of the balance two-thirds will be required for home uses, leaving little for shipment. At certain times we could not get cars during the past season for shipping grain, and the elevators were filled. The trouble lasted only about a month. The range of prices this year has been 9@20 cents, with the average about 14 cents, while last year it was 15@40 cents."

T. S. Campbell of Neola, Iowa, on the Chicago, Rock Island & Pacific Railroad, says: "Of last year's corn crop raised in Pottawattamie county three-fourths has been marketed, and one-half of the balance will be required for home uses. The range of prices this year has been 14@25 cents, with the average about 16 cents, while the range last year was 17@25 cents. Generally we have had no trouble in getting cars for shipping grain, but during the winter we experienced trouble at various times. I think the corn crop of Western Iowa has been pretty generally marketed."

The Inter-State Commission holds that a lower rate forced on carriers by competitive conditions beyond their control, and a greater rate for a lesser distance, not unreasonable in itself but lower than it would be were competitive conditions equal to the lower rate, is not an injustice and not in contravention of the statute.



BARNARD'S COMPENSATING SIDE SHAKE ELEVATOR SEPARATOR.

erations were confined to the terminal points, and it was therefore inadequate to protect the rank and file of the army of producers in this state who were obliged to market their grain at the interior or local markets. It is argued that the prime object for which this legislation was sought has been lost sight of, and that the producer is as badly as ever in the toils of the country buyer, and is still a prey to his alleged greed and extortionate practices. It is claimed that the grain growers of the state are suffering as badly as ever for want of an honest and intelligent inspection of their grain at the home market. A number of plans and remedies have been suggested, differing in detail, but all tending to the same theory, that the state should assume control by appointing inspectors at the several hundred interior markets. No system of this kind would ever prove practicable. It would involve the employment of a vast body of officials, at great expense, and owing to the difference in judgment that would naturally exist among so many, the vital feature of all inspection, *uniformity*, could never be attained. It would be no improvement whatever over the system now in vogue at country points. This is by no means intended as an argument that the present system is correct—far from it. It is not only radically wrong, but an unauthorized assumption of authority on the part of the country buyer, and if Section 30 of the present law has any meaning or significance whatever, then every person who is to-day assuming to act as an inspector of grain without having first been duly appointed and sworn as such is an imposter and subject to such penalties as are prescribed. The grain laws of this state

THE EXCELSIOR AUTOMATIC POWER GRAIN SHOVEL.

The use of the power grain shovel has become imperative in all establishments where the rapid transfer of grain from cars is desired; and so we find their use all but universal in large mills, elevators, breweries, etc. Our excellent engraving shows the "Excelsior" Automatic Power Grain Shovel, which has points rendering it worthy of investigation by the careful buyer. The cut shows a single machine operated by chain and sprocket, though the machine is also made with drum to work with rope.

One of the chief ends in view in designing this machine was to construct a machine that would work easily; so easily that a man could do a full day's work with it; for it is a fact that often half a day's steady work is all one man could do without laying off, and in many cases while one man carried the scoop another had to uncoil the rope. With the "Excelsior" it is claimed that one man can do the work of two. All the operator has to do is to carry the scoop with rope or chain attached into the car, a slight jerk will give the drum sufficient momentum, so that all the weight necessary to carry is the scoop with rope or chain. With the "Excelsior" one man can unload a car of 500 bushels of grain in fifteen minutes, and two men with a double machine can do it in five minutes. The "Excelsior" is perfectly automatic, throwing into gear immediately at any point in the car. It can be held wherever desired, and is sure to throw out of gear when scoop reaches the car door. When operated with chain the "Excelsior" is not confined to a short distance from the machine, but can be uncoiled to any length. It is only necessary that enough chain be provided to reach as far as is desired to go. This feature is of special value where the shovel is used for certain purposes, as on malt flour.

The method of operation is as follows: When the man with scoop goes into the car, thus unwinding shovel, the pins on drum *A* strike the pall with spring in casing *G*, and the weight *H* attached to chain over sprocket *B* and *C*, turns sprocket *C*, drawing shaft *D* through it, thus allowing clutch to engage, whenever the cam *F* is raised. When the operator has gone into car as far as desired, he thrusts the scoop into the grain with a slight jerk, thus making a slack in chain between the swivel sheave and drum *A*. The weight of chains on opposite side of the machine being heavier than that between swivel sheave and drum *A*, gives the drum a reverse motion. The pinion drum *A* in reversing come in contact with the lower end of pall in casing *G*, lifting the cam *F* and allowing the weight *I* to throw lever *E*, to which clutch is attached into gear, which starts the scoop with load toward the car door or point of discharge. As it moves in that direction the chain over sprockets *B* and *C* is taken up and pushes shaft *D* against lever *E*, thus disengaging the clutch when scoop is at original starting point or car door, and letting the cam *F* down in position to hold lever *E* until the pins on drum *A* again lift the pall *G* and cam *F*, by the reverse motion of drum *A* caused by the slack of rope or chain at swivel sheave, as before stated.

The "Excelsior" is offered to the public, not as an experiment, but as a success. Among late sales, are twelve machines for South America, four to Charles Counselman & Co., for their Englewood elevator, and one to the well-known firm of Miles & Son of Frankfort, Ky. It is made by WELLER BROS., 118 and 120 North avenue, Chicago, who will take pleasure in giving applicants any desired information.

The Victoria Rice Milling Company of Victoria, B. C., has distributed a carload of Red Fyfe wheat from Manitoba among the farmers, and a strong effort will be made to induce the farmers of that district to raise more wheat.

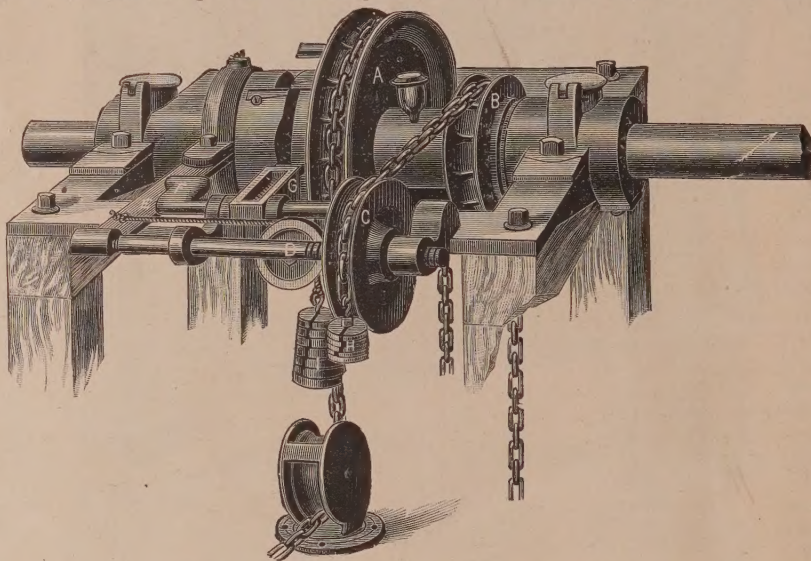
Advices from Texas state that reports from all wheat growing counties show that there will be only one-third of an average yield in the eastern and one-half in the northwestern counties. This is in consequence of an attack by myriads of small insects early in the spring and the floods later on. The crops of cotton and corn and other products are an average, with good prospects ahead.

THOUGHTFUL FARMING, NOT LAWS, ARE NEEDED.

A correspondent of *The Country Gentleman*, one of the best edited agricultural journals published in America, writing from Western Reserve, Ohio, in a recent article to that journal gave an excellent review of some of the causes that are responsible for the depression in the price of agricultural products.

He says: "If there were ever a nation on earth that fast developed into a class of agricultural grumblers and farm depression orators, it is this United States. To hear some of these talk and others write, one would think that the farmers of this country were four times over bankrupt. Of course there is a depression in agriculture, but it is not in this country alone. It is yet worse across the sea. The truth is that we have builded faster in this country than we can cover well, and we are now forced into markets with our surplus where we must compete with other nations—in a fight, commonly speaking, with other countries which have the same things to sell that we possess, and it is a game of underselling, and the producer 4,000 miles away gets the worst of it. Nor will cheaper transportation solve this problem. Cheaper freights on our corn, wheat and beef mean decreased price to the consumer and no rise at the producing end of the line. Cheaper freight always means cheaper food for the buyer.

"While study upon this point is all right it needs something besides 'bawling our woes' to set matters aright.



THE EXCELSIOR AUTOMATIC POWER GRAIN SHOVEL.

Just now the largest overproduction we have is in the class of demagogues, office seekers and agitators who are working their 'racket' for their own schemes, and not one of them has a reasonable remedy to offer for agricultural depression, save the wrecking of commercial enterprises, upsetting railway and transportation concerns, and putting a new and untried element in power in our government with the confessed purpose of making all other industries secondary to agriculture. A specimen 'brick' of this is foreshadowed by the asking of government to receive the farmers' products at 90 per cent. of its market value, and hold it a year for the farmer to redeem, but denying the iron man the same privilege, or refusing to store coal for the miner; for these two products are products of the earth as surely as wheat or corn.

"While we hear about the shrinkage of farm values in this country, and New England farms especially, what about the same troubles in England—their decline in farm values, the depreciation of rents, and the falling off of one third of the wheat acreage of that country in three years? If we are so unfortunate here, and they so prosperous there, why does one hundred millions of the surplus wealth of England flow to this country in one year for investments? To make the depression of this country appear great, the agitators suppress all facts of like nature in Europe, and the actual condition of labor there, and largely argue from false premises here. This is notable in the farm mortgage cry, and the alleged rapid increase of these. Lately we have obtained some pretty reliable figures of the farm mortgages of the state of Illinois. At the first trial balance the actual amount of secured indebtedness shrank over one-half from the figures that have been given out to show the 'deplorable

condition of the farmers' there. Then it was found that all of the mortgages in the state had been, by these same 'economists,' charged against the farms, when in fact 60 per cent was on city and village property, and not on farm 'acreage,' and at last assuming that not a dollar had ever been paid on any recorded mortgage, the amount would not aggregate 13 per cent. of the farm taxable property of the state. Could the exact amount be known of the credits on these mortgages, which the recorder's books do not show, there would be a yet further shrinkage of values of farm mortgages. Assuming that this same proportion of 60 and 40 per cent. holds good, then the farms of Indiana are mortgaged less than 9 per cent. of their taxable value. Canada is reported as carrying a total mortgage debt of 40 per cent. of her wealth, and late consular reports from Europe put the mortgages in England, France and Germany at a full half of their landed and dwelling value.

"So far as America is concerned, there will be an adjustment, and a restoring of equilibrium that will in time right affairs, and set us again upon our feet. Agriculture, like all else, swings from one extreme to the other. We are now swinging back from the extreme point where we were projected by the open-handed land policy of our government. After the war we failed to see that two million soldiers would not go back to the old life, and there must be an economic change of some kind, and so, not content with giving each soldier a farm, the broad prairies of the West were thrown open for homesteads, and every man upon the face of the earth who would accept it, was given a farm; and he came and all his 'flock.' Not yet content, it granted lands by the 'stateful' to the railway companies, which immediately built railways across the vast plains, and by cheap rates and much 'agency,' attracted millions of people, not only from the manufacturing East, but Europe as well, and put them to producing beef, wheat and corn; and actually overwhelmed the world with surplus products along these lines. This policy transferred one bread-eating man from Europe to this country and set him to producing bread for 500 others instead. What we are producing to-day, by good rights, should only have been reached in 1910, and given the chance for a gradual absorption of a healthy, increasing agricultural surplus.

"That some farmers are doing well and are satisfied, has the hope in it that others could, if they would, try to do better, and put thought and ambition to succeed into their work. Agriculture has, and ever will remain, the groundwork of all financial success. It may become unduly preyed upon at times, but when other industries begin to fail and lose their stability by the decline of agriculture, a revolution comes, the student of true political economy joins with the farmer, and times brighten. Law and legislatures cannot furnish a farmer with ability or love for his vocation any more than it can for any other man or class. Law may prevent discrimination between classes and industries, but the genius to administer one's farm affairs, to produce much and cheaply, and the kinds that the market most demands, is independent of all law and agricultural depression, and such a man stands out a beacon light to make much more emphatic the fact that agriculture does have its disciples who refute the assumption that the farmer must disappear, on the ground that he is losing his inheritance, through the law's delay, the combination of syndicates and trusts, the extortion of railways, the grasp of the money-lender, and the combining of all classes to grind him into the dust. Is it true, or is it the jargon largely of yet another class, led on by those who base their premises chiefly upon assumption, political theory, and actual ignorance of the true condition of American agriculture?"

A curiosity which is to be seen in an establishment on Wall street, New York, where rice is the single commodity dealt in, consists of two grains of rice in the hull, upon each of which is carved the figures of a Chinese god. Though the space covered is very minute for such figures, they are plainly discernible, and show marvelous skill and patience on the part of the Japanese carvers who executed them.

THE "RACINE" HEAVY WAREHOUSE MILL.

The grain cleaner of which we herewith give a cut, is manufactured by Johnson & Field Company of Racine, Wis. It was first gotten up expressly for the grain men of Chicago and Milwaukee, but since then has been adopted largely by the leading grain and elevator men and millers throughout the country. As will be observed by the illustration, it is built very heavy and strong, insuring the important advantage of durability; the irons and all portions of the machine receiving the greatest strain and wear are correspondingly heavy, and constructed after the most approved patterns. The shaft revolves in self-oiling, babbitted boxes, creating little friction and consequently requiring less power to run it than if these arrangements were of a less satisfactory nature. The eccentrics and shaker connecting rods are very heavy. It has a shake elbow so arranged that the shoe can be given a short, quick shake, which, with the assistance of strong blast on the sieves, proves very effective in removing chaff, foul seeds, etc.

Another advantage is that this machine is constructed with a side-shake, which enables the manufacturers to use shorter sieves and still give the machine the same capacity. This is also an improvement, as it is a well-known fact that impurities in grain or seed are much more liable to drop through in passing over a long sieve than in passing over a short one, and consequently remain in the grain, instead of being carried out behind. This machine has a capacity of from 200 to 400 bushels per hour and upward, doing excellent work and giving good satisfaction. It does equally as good work in cleaning seed as grain, and is claimed to be the most economical machine for all purposes.

Johnson & Field Company guarantee all their machines to do first-class work, and we would suggest to our friends who may be in need of any grain cleaning machinery, that it would be well for them to write JOHNSON & FIELD COMPANY for prices and further particulars before purchasing.

PRODUCTION AND SPECULATION.

The production of grain in this country last year, says the *Minneapolis Record*, was unusually large, and with too little foreign demand for it, excepting at figures no higher at least than similar qualities from other countries are offered at, prices are low. The idle talk of Washington statesmen and farmers' alliances that speculation is the cause of low prices is too superficial to need contradiction among thinking people. If importing countries can buy Russian wheats, Indian wheats, Australian wheats, or wheats of any other countries, on more favorable terms than ours, then ours are always left. The talk that with our ports closed importers would need to go without bread is merely buncombe.

There are always more or less of reserves in all countries that can be drawn upon in emergencies. There is no such thing as forcing other people to buy from us. All there is to the situation that has given us low prices is a supply that exceeds the demand for present use. There is a surplus of wheat, of corn, of oats and of barley that has to be held over into the next crop year. Of course it must be carried by somebody, and there is none to carry it but the speculator. If the producer holds it he is to that extent a speculator, and if the miller carries it over he is the same. The speculator, and no other, carries the surplus into the next crop year. The tendency of speculation is to enhance values, and millers decry it on that account, while farmers formulate resolutions against it because it depreciates values.

The way wheat is bought in the country is to sell for future delivery against the country purchase, making the handling a safe transaction. Of all the millions of wheat bought and sold in the interior elevators, it is all practically so handled. That is, it is bought and sold the same day. By doing that the country buyer is absolutely safe against changes in market values, and can in that, as in any other safe business, afford to do it at a smaller margin. If that kind of security, or some other, could not be had, he would have to protect himself by larger

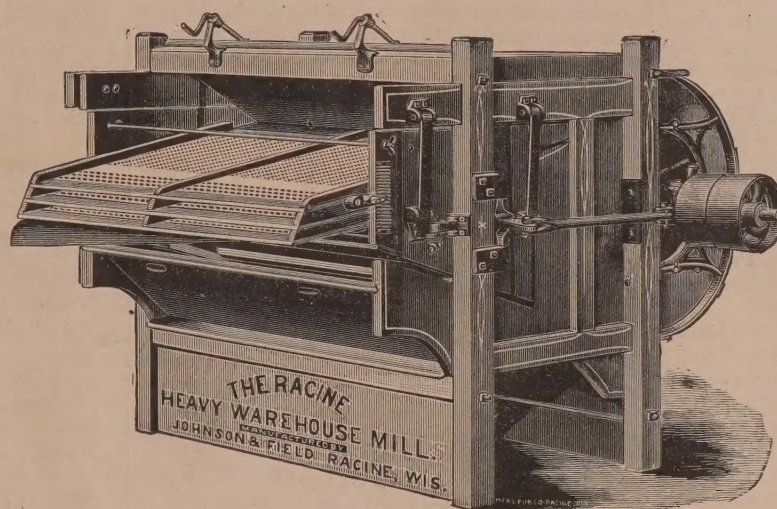
margin between his buying price and current market values. Of course the producer would get less money. With a surplus for shipment a market could not be sustained without speculative buyers, and there can be no such thing as speculative buyers without they are allowed to sell whenever they can do it most advantageously, whether that be before they have possession of the property or after it.

PHILADELPHIA'S EXPORT GRAIN TRADE.

The second report on the causes acting injuriously upon the ocean commerce of Philadelphia has been made.

The first of these reports was made on the 14th of March last, and it showed that there had been for the immediately preceding twelve years a steady decline in the foreign exports of the port of Philadelphia—a corresponding decline in the number of transient steamships arriving at this port; and that a large percentage of such vessels as did arrive here with inward cargoes had been compelled to leave our wharves in ballast for competitive ports in order to obtain outward cargoes. Our grain export trade had been reduced to a shadow.

It is not necessary to go into the figures. In searching for the causes of this startling decline in our ocean commerce the sub-committee charged with the investigation found that because of some hidden influences grain buyers from the city of Baltimore were enabled to offer to the Western sellers of grain much higher prices than grain



THE RACINE HEAVY WAREHOUSE MILL.

buyers from Philadelphia could, and thereby a large proportion of the grain export trade legitimately belonging to Philadelphia was directed to Baltimore, and thereby again it happened that steamships which came into Philadelphia with full cargoes had to go to Baltimore in ballast to get cargoes when outward bound.

The sub-committee had numerous meetings concerning this vitally important matter, in the course of which their investigations developed "alarming discriminations against Philadelphia as an export shipping port," and the sub-committee feels that it is warranted in the statement that this development "has led to the application of remedies, so that recently the conditions governing the export trade of Philadelphia, at least for the time being, have materially changed"—and very greatly for the better. How vastly better a few figures will show. In the whole year 1883, just prior to the beginning of these inquiries by the sub-committee of our commercial bodies, the entire export of grain for the year had dwindled to 1,809,215 bushels. After the inquiry began to be pushed with vigor and very damaging proof of discrimination was being procured, Philadelphia's exports began to increase, and now, in the first quarter of 1890, from Jan. 1 to April 12, they have increased to 9,444,936, five times as much, for a little over three months, as for the whole year 1888! —*Philadelphia Ledger*.

The Inter-State Commerce Commission confirms what the people of this section have persistently claimed, that grain rates "are grossly excessive" for short distances and "unreasonably high" on the long haul. If the railroads persist in ignoring the demands for a reduction the people must exercise their power and compel a reasonable concession.—*Omaha Bee*.

GOVERNMENT CONTROL OF INSPECTION.

In a letter to the Governor of Nebraska Mr. A. G. Scott of Kearney, Neb., has the following to say in regard to placing the inspection of grain under control of the National Government:

"Your letter to Senator Paddock, having reference to placing the control of grain inspection under national law, is the most important movement and the most vital to the protection of farm industry that my attention has been called to for some time. No class of industry has suffered so much from the result of an imperfect system of inspection as the producers of grain. Under the present system it is under the control of state law, or boards of trade, at the central markets of this country. Every market seems to have its own basis as a standard and is controlled by the circumstances that surround it. The great loss to the producer is in the fact that there is a clashing of interests between the receiver and exporter—the one claiming a high standard, the other a medium or low standard. The exporter being the controlling factor in moving the surplus to foreign countries, has succeeded in the establishment of a system of inspection that bears with a heavy hand on the hard-earned labor of the tillers of the soil.

"Under our present system grain may inspect No. 2 in St. Louis, No. 3 in Chicago, and perhaps No. 4 at Baltimore or New York. Under your advanced system of national control we should have the same grade at Omaha, Milwaukee, New York, and other Eastern markets, and not be subject to material loss in the price as the result of an imperfect system. No class of men have been in a position to see the calamity that has fallen upon the producers of the Northwest in unstinted measure as the local dealers in grain. In the movement of a new crop the local dealers buy on the basis of quality that has governed former crops, and if by chance there is a known prejudice against the state, as there was last season, the result of the sale will be one of a lower grade and consequent loss to the dealer. A depression in price follows, and general dissatisfaction prevails.

"There is no one thing connected with the purchase of farm products so unpleasant to the local dealer as to advise the farmer that his grain has passed into a lower grade than it was purchased for, and on the same market we cannot duplicate the price by 5 or 10 cents per bushel on wheat, and 2 or 3 cents on corn and oats."

Again, Mr. Scott writes the Governor, and says:

"I have with much care examined the daily market reports of Chicago, the largest corn market in the world. From Nov. 27 to May 19 for one day in each week I find the receipts of corn at Chicago on the days mentioned was 9,858 cars; number of cars that inspected No. 2, 3,255; number of cars that inspected No. 3 or less, 6,603. This tabulation shows that less than one-third of the receipts at Chicago inspected No. 2, leaving a difference of 5,618 cars less than the statement of the writer. If this number of cars was inspected No. 3 or less in Chicago and No. 2 at seaboard markets, the producer has lost not less than 2 cents per bushel and perhaps more, equal to a loss of \$56,180 for one day of each week. Is it not time for some one to advocate a radical reform in inspection at central markets, or the placing of inspection under government control?"

During May the following grain was exported from San Francisco by sea: 1,202,436 centals of wheat, 16,132 of barley and 2,707 of oats, against 825,815 centals of wheat, 17,293 of barley, and 4,720 of oats for May, 1889.

According to the report of George F. Stone, secretary of the Chicago Board of Trade, the visible supply of grain in the United States and Canada on Saturday evening, June 7, was 21,700,996 bushels of wheat, 14,214,612 bushels of corn, 6,153,871 bushels of oats, 697,127 bushels of rye, and 586,673 bushels of barley. These figures are smaller than the corresponding ones for the preceding week by 661,789 in wheat, and larger by 1,529,494 in corn. The visible supply of wheat for the corresponding week a year ago decreased 1,312,930 bushels.

COMMUNICATED

[We invite correspondence from every one in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interests of the trade at large, or any branch of it.]

HAVE DISSOLVED.

Editor American Elevator and Grain Trade:—Koenig & Lytle, engaged in the grain trade at Jefferson, and ten other points on line of C. & N. W. Railway in Wisconsin, have dissolved partnership. Mr. Lytle has bought his partner's interest and will continue to operate the business as before. This firm has for several years been the largest shippers of barley, of which they make a specialty, in the state, and their samples and grades are very favorably and well known in all the principal markets, especially in St. Louis. I inclose one dollar for your valuable journal for one year.

Yours truly,

JEFF R. SON.

CHANGE IN GRADES SUGGESTED.

Editor American Elevator and Grain Trade:—I notice that the Illinois grain shippers and the speculators are again quarreling about the proposed change in Illinois grades. Now, I have not had much experience shipping grain to Chicago, and do not know much about the grading there, but I wish to make a suggestion for the consideration of those interested in the inspection at that point.

If the good and bad qualities of the wheat were all given on the certificate of inspection, and the reasons given for its being placed in the grade given it, the shipper would always get a price nearer the value of his wheat and the grades would not be changed. This would be a compromise between the views of the speculators and the shippers.

When red winter wheat is placed in grade No. 2 let the certificate of inspection contain an explanation of why it is placed there, and tell whether or not it is light or dark, sound, plump or clean. In other words, they would have a number of grades of No. 2 red winter wheat, according as it possessed the different qualities which establish its value. They would have a number of different grades of each of the present grades, and each grade would be very limited.

This arrangement would, I think, meet the wants of the shippers and not interfere with the speculators.

Respectfully submitted by

KANSAS.

NON-FULFILLMENT OF CONTRACT.

Editor American Elevator and Grain Trade:—You will confer a favor by answering the following in your next issue: On March 6, 1890, we received from a Columbus, Ohio, firm an acknowledgment of the receipt of an order for three cars of corn, two cars of shelled corn and one car of ear corn. They stated, in their letter, that price of ear corn would be 37½ cents per bushel, f. o. b. cars here. Since that time corn has advanced, and ear corn would cost to-day about 10 cents per bushel more than at that time. We received the shelled corn within a reasonable time, but have not received ear corn. Have written the firm a number of times in regard to delay of shipment. They claimed that they could not get car, but we have been buying grain from another firm in the same city and shipments have been very prompt, and it looks to us very much as if the advance in price has something to do with delay. We wrote them a letter a few days ago, asking why corn was not shipped, and as yet have received no reply. What could or should be done in such a case? Could they not be compelled either to ship corn or remit the difference in value made by advance in price?

Yours respectfully,

KEYSTONE.

[In reply to the foregoing would state the measure of damages for non-delivery of goods is different in different states. We may say in general, however, that in an action by vendee against vendor for non-delivery, the measure of damages is the difference between the price agreed and the market value of the article at the time and place of the promised delivery, if no money has been paid by vendee, but if vendee has paid in advance he may recover the highest price of the goods at any time between the

stipulated time of delivery and the time of trial of suit. Because if vendee has paid nothing he has the money in possession and might have purchased other goods of like quality the very day the goods should have been delivered; whereas, if the purchaser has paid the price of the article in advance the seller has kept both the article and the use of the money; has rendered the purchaser unable to protect himself by going into the market to buy the article, and is liable for the highest price that the article attains prior to time of trial.]

ORGANIZATION FOR PROTECTION.

Editor American Elevator and Grain Trade:—Inclosed please find a circular calling for a meeting of elevator owners and lessees at Concordia, Kan., June 7, 1890. It is the intention to make this the beginning of an organization which shall include the elevator men of the grain growing states, who represent millions of dollars thus invested, and who are striving to work for the best interests of the trade. They feel that some recognition, some "protection," so to speak, should be afforded elevator owners who fight the battles for traffic and furnish facilities for railway companies, over that indiscriminate, vacillating class of so-called track buyers, who do not represent the legitimate trade, and who are in the business only temporarily. All matters pertaining to this question and other questions of interest to the trade will be considered at the convention.

Yours very truly,

W. T. CAYWOOD.

Clifton, Kan.

CHICAGO GRADES AND INSPECTIONS.

Editor American Elevator and Grain Trade:—I think I showed conclusively last month that Toledo's wheat receipts had decreased instead of increased, as was prophesied by the Illinois shippers. A large per cent. of fine milling wheat may have been shipped from Central Illinois to Toledo, but a larger per cent. was sent to Chicago.

McFadden & Co. are all right in objecting to paying for the inspection of wheat that has been sold by sample before its arrival at the terminal point. I don't think any one should be compelled to take and pay for a thing that is of no use to them. The inspection at Toledo is not compulsory, and it is not controlled by the state, but by the Toledo Produce Exchange, which uses the inspection department to increase as much as possible the grain receipts of Toledo. There is no material difference between its established grades of No. 2 wheat, as described in the report of the secretary of that exchange, and the standard grades established by the Illinois Board of Railroad and Warehouse Commissioners.

If the same quality of grain is graded higher at Toledo than at Chicago, it is the fault of the inspectors and not of the standard grades. It is more probable that the Toledo inspectors give Illinois wheat a higher grade than it is entitled to, than that the Chicago inspectors place it in a lower grade than it deserves. Toledo inspectors are directly interested in grading wheat which should go to other centers higher than it deserves, for by so doing the business of their employer is increased. By so doing they depreciate the value of all Toledo grades, and compel the shipper who can ship to no other market without great inconvenience to accept less than his wheat is worth.

Chicago inspectors, on the other hand, are directly interested and strictly instructed to grade according to the standard grades established by the commission. It is admitted that their inspections are not always just, but they are as much so as any other grain inspection department in existence.

That Chicago grades are as good and reliable as any other, is proved by the price they command. Seldom do the same grades of markets farther east command a better price.

McFadden & Co.'s plan of having the inspection department take an official sample of every car that fails to grade No. 2, and deliver to consignee, is a good one, and in the absence of a better plan country shippers will do well to adopt it.

It would be greatly to the advantage of country shippers to clean all grain before shipping it. They would save freight as well as get a better price for their grain.

The present inspection department at Chicago and standard grades of Illinois are as good as they have anywhere, and much better than at most grain centers. I do not think they are so perfect that it is utterly impossible to improve them, but I am satisfied the changes proposed by the Illinois Grain Merchants' Association would not be an improvement, and I am very decidedly opposed to it.

Very truly,

SPECULATOR.

LATE PATENTS.

Issued on May 13, 1890.

WOVEN FABRIC FOR MACHINE BELTING.—Joshua B. Maddox, Portland, Me. (No model.) No. 427,700. Serial No. 333,879. Filed Dec. 16, 1889.

AUTOMATIC DUMPING BUCKET FOR HOISTING AND CONVEYING MACHINES.—Alexander E. Brown, Cleveland, O. (No model.) No. 427,830. Serial No. 341,156. Filed Feb. 20, 1890.

WHEAT SCOURING MACHINE.—Hiram J. Livergood, Brantford, Ont., Can. (No model.) No. 427,585. Serial No. 208,675. Filed July 21, 1886.

Issued on May 20, 1890.

BELT FASTENER.—Henry G. Parsons and William A. Brown, New Britain, Conn. (No model.) No. 428,130. Serial No. 319,408. Filed Aug. 1, 1889.

CLOVER HULLER.—David Whiting, Ashland, Ohio. (No model.) No. 428,269. Serial No. 334,190. Filed Dec. 18, 1889.

POWER TRANSMITTER.—Howard R. Knox, Richmond, Mich. (No model.) No. 428,497. Serial No. 343,531. Filed March 11, 1890.

SPLIT PULLEY.—Edward J. Pennington, Mount Carmel, Ill. (No model.) No. 428,520. Serial No. 344,522. Filed March 19, 1890.

WEIGHING AND PRICE SCALES.—Henry C. Hart, Detroit, Mich. (No model.) No. 428,560. Serial No. 318,265. Filed July 22, 1889.

SHAFT BEARING.—Hippolyte Schneider, Pittsburg, Pa. (No model.) No. 428,526. Serial No. 343,475. Filed March 11, 1890.

Issued on May 27, 1890.

BALING PRESS.—Theodore Tebow, Nicholasville, Ky. (No model.) No. 428,976. Serial No. 330,357. Filed Nov. 14, 1889.

PEA THRESHER AND SEPARATOR.—Emetson E. Sanford, Milan, Tenn. (No model.) No. 428,958. Serial No. 339,639. Filed Feb. 8, 1890.

PULLEY.—Harrison T. Briggs, South Bend, Ind., assignor for one-half to Albert Myers, same place. (No model.) No. 429,009. Serial No. 331,032. Filed Nov. 20, 1889.

METALLIC ROOFING.—Charles B. Cooper, New York, N. Y. (No model.) No. 429,015. Serial No. 341,160. Filed Feb. 20, 1890.

APPARATUS FOR WEIGHING GRAIN.—Eugene O'Brien, Liverpool, County of Lancaster, Eng., assignor to Henry Pooley & Son, same place. (No model.) No. 428,816. Serial No. 209,503. Filed July 30, 1886. Patented in England Aug. 10, 1885. No. 9,489. In Canada Aug. 10, 1885. No. 24,694.

Issued on June 3, 1890.

BALING PRESS.—Manetho C. Jackson, Denver, Colo. (No model.) No. 429,240. Serial No. 313,155. Filed June 5, 1889.

BELT REPLACER.—Frank Balderson, Oketa, Kan. (No model.) No. 429,372. Serial No. 342,935. Filed March 6, 1890.

METHOD OF MANUFACTURING FLAT WOVEN GUT BELTING.—John Grifflin, Cork, Ireland. (No model.) No. 429,270. Serial No. 336,830. Filed Jan. 13, 1890. Patented in England April 9, 1889. No. 6,639.

GRAIN METER.—George B. Howland, Pontiac, Ill. (No model.) No. 429,589. Serial No. 318,968. Filed July 27, 1889.

HORSE POWER APPARATUS.—Oscar Johnson, Lindsborg, and Nels A. Holtman, Smolan, Kan., said Holtman assignor to Johnson. (No model.) No. 429,382. Serial No. 315,117. Filed June 21, 1889.

APPARATUS FOR THE TRANSMISSION OF POWER.—Edwin E. Porter, Canal Fulton, Ohio. (No model.) No. 429,153. Serial No. 343,010. Filed March 7, 1890.

WOOD SPLIT PULLEY.—John B. Cornwall, Moline, Ill., assignor to the Barnard & Leas Manufacturing Company, same place. (No model.) No. 429,564. Serial No. 324,190. Filed Sept. 17, 1889.

SCALE BEAM AND WEIGHT THEREFOR.—Ira L. Purdy, Macedon, N. Y., assignor to Hannah H. Purdy, same place. (No model.) No. 429,477. Serial No. 341,976. Filed Feb. 27, 1890.

The area of wheat production is increasing in India, Russia and Eastern Europe, and the farmers of that country can not afford to eat wheat bread, and so have more and more of a surplus to export. Our farmers can not compete with them, and if they want to get good prices for their wheat they must raise only what this country can consume.—Louisville Commercial.

CARLISLE ON GOVERNMENT PAWN SHOPS.

An Alabama farmer, who is a member of the Farmers' Alliance of Macon county, wrote to Senator Carlisle of Kentucky recently asking for his views on the proposed plan to have the government establish warehouses for storing and loaning money upon farm products.

From Mr. Carlisle's reply, which is a very able exposition of the defects of the plan, we take the following:

The whole scheme, in its general form and design, is vicious in principle, and if adopted would prove ruinous to every interest it is intended to benefit. The plan to which you allude in your letter is to establish what are to be denominated sub-treasuries, and erect public warehouses in every county in the United States which produces and sells annually more than \$500,000 worth of wheat, corn, oats, cotton and tobacco, and permit the owners of these products, whether farmers or not, to deposit them in these warehouses and receive from the government in treasury notes, to be issued expressly for that purpose, 80 per cent. of the market value of the products. Of course, there must be officers and employees to take charge of these warehouses and their contents, receive and receipt for the products deposited, pay out the money to the depositors, receive the money when the products are redeemed, sell unredeemed property, and generally to exercise the combined functions of warehousemen, bankers, auctioneers and executive officials. All these officers and employees must be compensated for their services either by fees charged to the depositors of products or by payments out of the public treasury, and all or nearly all will be partisans of the administrations in power, because under the constitution they cannot be chosen by the people, but must be appointed by the President, or the head of a department, or the judges of the United States courts.

It is proposed to appropriate the sum of \$50,000,000 at once to begin the erection of these warehouses, and while we have no accurate data on the subject, it is safe to say that they would cost altogether many times that amount, all of which must be raised by taxation on the people, the farmers themselves. There are more than 2,400 counties in the United States, but not more than one-third of them, if that many, produce and sell annually more than \$500,000 worth of wheat, corn, oats, cotton and tobacco, and therefore not more than one-third of them could possibly avail themselves of this plan. It will be seen, therefore, that it is a plan to compel the government to issue money for the benefit of the people living in the rich and productive countries at the expense of the people living in the poorer and less productive ones. Moreover, it is a plan to enable unscrupulous speculators to take advantage of the farmer's pecuniary necessities, and extort exorbitant prices for food from people who reside in cities, towns and villages, and from people who reside in the country, but do not own these particular agricultural products.

It is evident that no farmer will subject himself to the labor and expense of transporting his products to the public warehouses, and to all the other charges which he must pay for storage, for handling and for taking care of them while there, when he has barns and granaries at home, unless he is in debt and absolutely needs the money which the government is to advance, and if he is in that unfortunate condition from what source is he afterward to acquire the means to redeem the products by returning the money and interest and paying the warehouse charges? In a great majority of cases he will never be able to redeem them, but will be forced to lose the remaining 20 per cent. of the value of his products, or sell his warehouse receipt for whatever he can get for it, which will be very little, for it must be remembered that after he gets his warehouse receipt he has a remaining interest of only 20 per cent. in the product, less charges for interest, shortage, etc. And this is all he can dispose of. He will find the time rapidly approaching when he must have money to redeem his products or sell his small remaining interest in them, or allow them to be sold at public auction by the government, and this will be the golden opportunity of the speculators, whose agents will swarm all over the country ready to take the warehouse receipts from the embarrassed owners for a mere nominal sum. The receipt is simply a privilege of redemption, like a pawnbroker's ticket, and the farmer, being himself unable to redeem, will be forced ultimately to dispose of it at any price offered. I do not think that any considerable number of intelligent people in this country will unite in ask-

ing the government to establish a system which will compel them in a large number of cases to sacrifice the products of their labor.

But suppose the farmers are able to redeem the products in order to offer them for sale in the market, what would be the necessary effect of the proceeding? When they deposit their products in the warehouses the volume of the currency is immediately expanded, and prices rise because the government has issued new treasury notes to the amount of 80 per cent. upon the products, but when they withdraw the products for sale in the market the volume of the currency is immediately contracted, and prices fall, because when the withdrawal is made all the treasury notes originally issued must be returned and canceled. The very moment the deposits are made, and as long as they remain in the warehouse and beyond the control of the farmer, there is an enormous and dangerous inflation of the currency, and prices are high, but the very moment the farmers withdraw their products for sale there is an enormous and dangerous contraction of the currency, and prices are low.

According to the latest official report upon the subject, the total amount of currency in the country is \$2,060,758,071, but \$622,764,278 is held in the treasury of the United States, leaving about \$1,500,000,000 in active circulation among the people. It was said by one of the leading advocates of this scheme who appeared before the Senate Committee that in order to carry it out it would be necessary to double the present volume of currency in circulation once every year, and as the products can remain in the warehouse only twelve months, of course about one thousand five hundred millions of dollars would have to be retired and canceled every year, two changes in the volume of currency, either of which would be absolutely ruinous to all the commercial and industrial interests of the people.

No business of any kind could be transacted in any country in the world under such a financial system as this, and the farmers and laboring people would be the first to feel its fatal effects. The fluctuations in the wages of labor and prices of commodities would be so sudden and so great that no man could afford to enter into a contract of any kind. All credit would be utterly destroyed; the laborer would find that the wages which he had agreed to receive when the currency was contracted would be insufficient to buy bread for his children when the currency was inflated; and the farmer would find, when he undertook to purchase his supplies with the treasury notes received on his products, that on account of the temporary inflation it would require twice as many dollars to procure the same articles as were required before the deposits were made. The entire business of the country would be thrown into the most profound confusion twice a year. Some would find themselves suddenly bankrupt by the contraction of the currency and a decline in prices, while others would find themselves suddenly enriched, or apparently enriched, by the inflation of the currency and a rise in prices; but all would share substantially a common fate in the end, for the growth and prosperity of the country as a whole would be destroyed as long as such a system existed. But during the time when these great food products are locked up in the warehouses, or the sub-treasuries, as they are misnamed, what is to become of the millions of people who reside in the cities, towns and villages, and the other millions who reside in the country but own no wheat, corn or oats? They are to be starved into submission to the demands of speculators; they are to be deprived of bread until such time as they become willing to pay whatever prices the purchasers and holders of warehouse receipts may see proper to extort from them.

No such facilities as this scheme will afford for controlling the markets for purely speculative purposes have ever existed in this or any other country, and no more perfect system for the oppression of the poor could be devised. The exact quantities of products on deposit in the several public warehouses would be known in every commercial and financial center, and combinations to purchase and hold the receipts could be easily made, especially when they can be procured by the payment of a small percentum of the value of the deposit.

But it may be contended that the farmers can sell their products while they are on deposit, and receive the benefit of the high prices which will temporarily prevail on account of the inflation of the currency. If the volume of currency were to be permanently increased so as to make prices permanently high, there would be some force in this suggestion, though even in that case the prices of

everything the farmers are compelled to buy and use would be increased in the same proportion, and they would gain nothing substantial in the end. But the volume of currency in circulation is not to be permanently increased under this plan, for, as already stated, each inflation must be almost immediately followed by a corresponding contraction. In view of this inevitable contraction and subsequent fall of prices, of course, while the currency is inflated, the prices are high. No actual consumer will purchase the stored products except in such small quantities as he is compelled to use from time to time. The regular and legitimate market which the farmer has heretofore enjoyed will be in a great measure destroyed, and the trade will necessarily fall principally into the hands of combinations and syndicates of speculators who are able by reason of their large capital to monopolize the stored products and keep the prices up for their own exclusive benefit after they have purchased from the farmers. The farmers cannot combine to keep the prices up, because in the first place, they are too widely scattered to act in concert, and in the second place, they are not in a pecuniary condition to carry their products beyond the end of the year, when they must be redeemed from the warehouses or sold at auction by the government. If they were in a condition to do this they would not need public warehouses or advance of money from the government.

COMPLAIN AGAINST KANSAS CITY INSPECTION AND WEIGHTS.

A number of complaints have been made against the poor inspection of grain and careless weighing at Kansas City, Mo. The complaints are made so frequently that one cannot help but believe there is some cause for them. The Missouri State Inspection Department surely knows that its Kansas City inspectors are not giving satisfaction, but still no changes have been made.

Taylor Miller, a grain shipper of Salina, Kan., in a communication to a Kansas City daily says: "A peculiar and detrimental state of affairs seems to exist at Kansas City in regard to the testing and inspection of wheat. We have been shipping grain for the last twelve years, principally to Kansas City, and would prefer shipping there as it is a near home market, but we must say that of all the doses that we have ever got we have had dished up to us at that place, both on tests, weights and inspection.

"In the second place our cars run from three to fifteen bushels short; second, inspectors' test weights never fail to be from one to a pound and a half less than ours, and we have the standard half gallon Howe test scale, which is taken anywhere as correct, absolutely. Some time ago we shipped to Kansas City two cars of good fair soft No. 3 wheat, testing respectively 58 and 58½ pounds. In due course of time we received inspection certificates which showed us that these two cars had graded rejected, and tested 57 and 56½ pounds; also stating that the best bid was net to us 55 cents, but upon our complaint of the inspection was sold for 56½ cents, which we finally accepted. On receipt of account sales we found that one car was short eleven bushels and thirty pounds, the other ten bushels and fifty pounds, a total of twenty-two bushels and twenty-two pounds. Later, we shipped another car of No. 2 soft wheat, testing 60½ pounds, which also graded rejected, and tested 59 pounds, according to the inspection receipt received.

"Anyone can see that there must be something wrong when rejected wheat sells for a good No. 3 wheat price. Either the inspector is a fraud, or incompetent to fill such a responsible position. A state of affairs of this kind allows the commission men too much latitude. They can, if they see fit or want to be dishonest, take advantage of the shipper. For instance, say the commission men send to the shipper inspection certificates, stating his wheat has graded rejected and sold some for 45 or 50 cents, as he chooses, stating that this is a good price for rejected wheat, and would be what it really rejected grain. However, we are happy to say that the commission firm with which we do business have not taken an unfair advantage of us and have gotten us a two and three wheat price for our rejected wheat. And we could not have kicked, as they were backed up by the inspector's certificate. It seems to us that if other parties shipping to Kansas City are treated as we were in regard to inspection and weight it certainly will have a strong tendency to drive the grain trade away from that city and to some competing point where we can get what is ours and have justice done."

Trade Notes.

The Greenville Corrugated Iron Roofing Company has been organized at Greenville, Ala., to manufacture iron roofing.

Ed Arthur of Maroa, Ill., has invented an automatic grain measure, which is especially adapted for measuring grain from a separator.

A factory is being fitted up at Bucyrus, Ohio, for the manufacture of Hawks' Automatic Grain Scale, which will soon be placed upon the market.

Thornburgh & Glessner have been incorporated at Chicago with a capital stock of \$50,000, to manufacture mill and elevator machinery. The incorporators are H. L. Thornburgh, Arthur W. Glessner and Timothy F. Mullen.

The Milwaukee Boiler Company has been organized at Milwaukee, Wis., to manufacture steam boilers and their appliances. The incorporators are Edwin Reynolds, W. W. Allis, Jas. S. Church and Jas. D. Miller, with a capital stock of \$100,000, divided into 1,000 shares of \$100 each.

Charter Gas Engine Company, Sterling, Ill., write us: "We have booked orders during May for 'Charters' to Connecticut, Maryland, New York, Wisconsin, Minnesota, Iowa, and several to Illinois. They are to run machine shops, printing presses, dynamos, factories, grain elevators and feed mills galore. We are working most of our force fourteen hours per day, and are unable to overtake our orders."

Borden, Selleck & Co. of Chicago, Ill., inform us that they have been very busy filling orders for irrigating pumps, made of Harrison Conveyor. An ordinary horse power is used to drive the pump, and the outfit gives the purchaser complete control of the irrigating feature, at a very light cost. Among the recent sales of Harrison Conveyor for other purposes are J. A. Aipel, Stillwater, Minn., and Aug. Wolf & Co., Chambersburg, Pa.

Huntley, Cranson & Hammond of Silver Creek, N. Y., write us: "We are glad to say that business is extraordinarily good with us. May was the largest month we have had since we have been in this line of business, and we are nearly one hundred orders behind for our different machines. Running full blast. It seems to be now that there is a great craze for our different machines, from No. 1 up to the largest sizes that we make, which certainly is very gratifying to us."

The Chesapeake Belting Company of Baltimore, Md., manufacturers of stitched canvas belting, etc., write that they have never been so busy, and taking their cue from the present unprecedented activity, look upon the prospects as unusually good. They have recently negotiated a contract in Ohio of over \$7,000 in the aggregate, one in Minnesota of over \$3,000, together with a very large number of smaller ones, scattered throughout the United States.

The Heidenreich Company, the well-known elevator builders of Chicago, have the contract for a 250,000-bushel grain elevator at West Argentine, Kan., to be built on their new plan for cleaning elevators. The cleaning and handling department is to be built this season and the storage later. The same firm is also building a cleaning elevator for Regna Bros., at Forty-fourth street and Wabash Railway, Chicago, and planning a large elevator to be built at Omaha this season.

Messrs. C. Reuther & Reisert, who are the largest manufacturers of automatic grain scales in the world, have placed their latest improved scale, "The Chronos," on the American market, and have opened an office in New York, 74 Cortlandt street. We hear that the Chronos Scale is largely in use all over Europe in all modern elevators, flour, rice and oil mills, breweries, malthouses and distilleries, and that it is adopted as a standard by several governments. Recently the Chronos has been adopted by the Roumanian Government for their new and large elevators in Gala'z and Braila, where there will be thirty-four of these scales at work, each of which has a capacity of about 100 tons an hour. The Russian railway companies who are now erecting large elevators on the different lines in the American style and outfit, have ordered quite a number of Chronos Scales of the largest size made. This speaks well for the excellence of these weighers. Mr. W. Reuther, the American representative

of the firm, informs us that he will soon make a trip through the country to all the larger elevators and mills, and will show a working model of his new automatic scale. Before coming to America Mr. Reuther introduced the Chronos in England and Ireland, where he had an enormous success everywhere. One single firm—the well-known brewers, Messrs. Guinness & Co. of Dublin—are using seventeen of Reuther & Reisert's patented scale, the five first of which are working continuously since 1878. Mr. W. Reuther has placed the sole agency for Great Britain and Ireland in the hands of S. Howes, London, the branch firm of the Silver Creek Eureka Works.

CANADIAN GRAIN INSPECTION.

Evidently the Canadian system of grain inspection, by which all grades are fixed under the authority of the Central Government at Ottawa, while at times it may have its disadvantages, says the *Winnipeg Commercial*, is a vast improvement upon the United States system of every state controlling its own inspection. There is a never-ceasing wrangle between different sections there over grain grades, and even with an honest effort made to suit the wants of the locality, a system of inspection is sure to have its army of opponents and kickers at outside points, from which shipments come, and an illustration of the old school lesson of "The old man and his ass," is furnished from time to time.

But the Canadian system has also the great advantage, that inspectors are not mere political partisans, to be changed with the changes of administration, as is too frequently the case in the United States. Inspectors here are selected after careful examination as to their competency, by a board of competent examiners, and their appointments are made by the Dominion Department of Inland Revenue, while their time of office lasts while they perform their duties in a competent manner. A Canadian inspector is thus placed in a position where he does not require to trim his inspection to suit any political breeze, while his working under a board of competent examiners, who decide all appeals against his inspection, furnishes a complete guarantee against his being arbitrary, or falling into any fossilized rut in doing his work.

The system of track sub inspectors, such as are appointed in places like Chicago, and too much under the influence of political pressure also, does not seem to work smoothly, and there will crop out from time to time proofs that competence was not the principal aim in their selection and appointment. In Chicago, anyhow, there is an uncertainty about grain inspection which does not exist anywhere in Canada. In Winnipeg, for instance, the changes made from an inspector's decision by the appeal board do not average one car to every million of bushels.

IMPORTANT FACTS.

The St. Louis *Globe-Democrat*, in criticizing the Butterworth Bill, says we are confronted by two important facts which Messrs. Butterworth and Ingalls have either ignored or forgotten: First, there are real as well as fictitious transactions on the exchanges; and secondly, if the sales are immensely in excess of the actual supply, the purchases must also be in excess. It would be desirable to abolish all fictitious deals, but how can we do it without stopping the deals which are legitimate? What process or device will enable us to get at the actual intent of buyer or seller if he does not choose to reveal it? If extravagant sales depress the market and injure the farmer, as Mr. Butterworth says they do, then the equally extravagant purchases which must be made, or else the sales could not be consummated, must relatively and proportionately strengthen the market.

The fact is, however, the evils which the Ohio and Kansas statesmen are fighting against are largely imaginary. Honest men as well as knaves deal in options, and bulls as well as bears have a word to say in the fixing of rates. Supply and demand, in the last analysis, determine price. No clique of bulls can keep rates above or bears can keep rates below the level at which they would naturally rest in any event, except for comparatively brief periods. On the whole, speculation, in causing a comprehensive and accurate knowledge of conditions all over the world to be obtained, has steadied the market and vastly benefited producer as well as consumer. If the Butterworth proposition were enacted and could be enforced, it would cause far more flagrant and grievous wrongs to the farmer and consumers than those which it is designed to remove.

NEBRASKA'S ELEVATORS.

The report that Clark Woodman proposes to build an elevator with a capacity of 1,000,000 bushels, says the *Omaha Bee*, led to an investigation of the capacity of the elevators of this city and the state.

These elevators already established in Omaha, with one across the river, are capable of handling about 2,500,000 bushels daily. The capacity of elevators "A" and "B" is in the neighborhood of 1,300,000 bushels, that on the other side of the river 1,000,000, and Fowler's about 200,000. Those located along the Union Pacific system and tributary to Omaha have a capacity of probably 1,500,000, those on the B. & M. 2,000,000, and those on the Elkhorn something like 1,000,000. There are one or two along the Missouri Pacific, also a few operated by private parties, but their capacity is not known.

The Himebaugh & Merriam elevator has changed hands and is now under the management of the new company. Frank H. Peavey of Sioux City bought a half interest, which necessarily brought about a reorganization. He was elected president; his brother, C. T. Peavey, vice-president, treasurer and general manager; A. B. Jacquith, assistant manager, and Ed. W. Peck secretary. H. W. Rodgers and S. B. Cochran, the old manager and treasurer, respectively, are retired. The new board of directors is composed of Frank H. Peavey, A. B. Jacquith, Edward W. Peck, W. A. Paxton, Nathan Merriam and D. S. Barriger.

While Mr. Woodman is interested in the company that controls forty elevators on the B. & M. system, and also a large one at Lincoln, it is understood that he is making the proposed investment here on his own responsibility. The elevator will cost when completed about two hundred thousand dollars.

Messrs. Peavey and their associates have changed the name of the firm to the "Omaha Elevator Company."

INSIDE HISTORY.

The Board of Trade man was lying on a sofa, and had given orders to his clerks that he must not be disturbed. Not to put too fine a point upon it, the Board of Trade man was full to the chin with whisky.

"You can't see him, sir!" said one of the clerks to an excited man at the door of the office.

"I've got to see him! It's a matter of the greatest importance!" said the caller, brushing the great man's subordinate aside and hurrying into the room.

"Say, old man," he exclaimed, as he went to the sofa and shook its occupant roughly by the shoulder, "they're pushing me like blazes in that deal, and I've got to have some collateral right now or I'm busted!"

"Don't you know better, sir," shouted the Board of Trade man, sitting up in a towering rage, "than to bother me about business when I'm drunk?"

"And don't you know," yelled the excited caller, "that you have no business to be drunk in business hours?"

"That's true," hiccupped the great man, collapsing at once. "Boys," he continued, turning to the clerks, "let him have all the money he wants, dang him!"

NEW RULING ON C. O. D.

The Commissioner of Internal Revenue has recently made the following ruling upon the "C. O. D." question: "I am of the opinion that when a person makes a bona fide offer to purchase goods, and directs in the same order that the goods shall be sent by a common carrier or any one else to a place designated by him, the price to be paid at the place of delivery, and the order is accepted by the seller, and the goods are separated from the other goods of the purchaser, and are delivered to the carrier with instructions to deliver to the purchaser at the place named by him, and collect the purchase money at that place, that the place of sale, under the law of Congress imposing a special tax upon wholesale dealers, is the point at which the goods are ordered, and set apart and delivered to the carrier. The true test is, was the offer on the part of the purchaser a bona fide offer to buy, and was it so accepted by the seller? If the purchaser should decline to receive the goods and pay for them, could the seller maintain an action for the price thereof? Any other rule, it seems to me, would be doing great violence to the acts of Congress imposing these taxes."

The grain louse and the Hessian fly are doing much damage to the oat and wheat crops near Hemker, Mo.

MEETING OF ELEVATOR OWNERS AND LESSEES AT CONCORDIA, KAN.

In response to the following circular recently issued by Kansas elevator owners and lessees, a goodly number of elevator men from Kansas and Nebraska met at Concordia, Kan., June 7, to consider the matter therein proposed, and other questions of interest to the grain trade:

IMPORTANT TO GRAIN DEALERS.

To all owners and lessees of grain elevators in Kansas, Nebraska, Missouri, Illinois, Iowa, Indiana and other grain exporting states:

Gentlemen:—For the objects and purposes herein stated we especially invite your earnest attention and active co-operation.

It has been the universal custom of railway corporations, performing their duty to the public as common carriers, to provide facilities for the storage or housing of all classes of wares, merchandise, live stock and freight of all kinds, save that of grain, which, requiring a vast outlay of money to provide for storage or housing, has been done at the expense of firms and individuals without any compensating benefits whatever.

It can be stated without contradiction that common carriers derive immense revenues from grain shipments in the several grain-growing states of this country, and at no expense to themselves in the way of providing storage or warehouse facilities for receiving, storing, handling or loading the same, this being done at the expense of firms and individuals, without compensation or remuneration.

Is it just that private parties should provide these facilities and privileges for the benefit of the common carriers, await their pleasure to furnish cars for transporting the grain to market and receive no compensation from the common carriers for such labor and service performed?

Surely not. The elevator owners and lessees have borne this grievance for many years, and feel that it is their duty to request of the railroad companies of the several states that, where proper elevator facilities are now or may be hereafter provided for the receiving and loading of grain at the stations of said railroad companies, that common carriers, who are the beneficiaries of such services, should either furnish such facilities at their own expense, or compensate said firms or individuals who provide these necessities.

With the above object in view we request the hearty co-operation of all parties interested in this movement in the several states, and by united action the object to be attained will be consummated.

All interested parties receiving this communication will please meet at Concordia, Kan., at 1 o'clock P. M., June 7, 1890, for the purpose of considering the matter and effecting a permanent organization to act in connection with similar organizations from adjoining states, and to agree upon some practical way to introduce our claims to the several railway corporations, and to take such further action as may be deemed consistent. It is desired that as many as can will be present at the Concordia convention, and that those who cannot, especially from the neighboring states, will communicate their views and opinions to be read and discussed at the pleasure of those assembled.

The foregoing circular has been sent out by Mr. W. T. Caywood of Clifton, Kan., by order of committee.

W. A. Mosher of Clyde, Kan., was elected chairman of the meeting, and W. T. Caywood of Clifton, Kan., secretary.

Communications were read from numerous parties in Illinois, Indiana, Missouri, Nebraska and Kansas, expressing their sympathy and hearty accord with the movement, and a desire that the deliberations of the meeting would result advantageously to the trade.

The present situation of elevator owners was fully discussed by those present, all agreeing that they were being discriminated against, that their property was depreciating in value, that they were performing services gratuitously for which they should justly receive compensation, and that there were numerous evils connected with the trade to be eradicated only by effective, active and general organization.

To further the object mentioned in the circular, a statement of grievances was prepared, discussed and adopted, to be presented to the railway managers at the earliest possible date. A committee of five for each railway system in Kansas and Nebraska was appointed to secure the signatures to the petition of all owners and lessees of grain elevators, who are operating the same, on the re-

spective lines, and to present and argue the same before the railway managers.

By dividing the work as indicated it is thought that the work can be greatly accelerated, and the territory thoroughly and quickly covered. A good, strong committee of the brightest and most influential elevator men will be secured to fight for the interests of the trade before the managers, and they will have the backing of every elevator man of the two states.

Recognizing the fact and potent force of the principle of organized effort in the accomplishment and furtherance of all worthy objects, and especially the immense power of elevator men throughout the country that might be wielded for the best interests of the grain men, a constitution and by-laws were adopted, and the following officers duly elected: Mason Gregg, Lincoln, Neb., president; Geo. C. Miller, Clifton, Kan., vice-president; W. T. Caywood, Clifton, Kan., secretary; and E. T. Reach, Clyde, Kan., treasurer.

All officers and committees will begin work immediately, and in earnest, and it was the sentiment of all present that with such an organization as is proposed, material good can be accomplished for the welfare of the trade. The justice of the proposition cannot be considered discrimination, for elevator owners are themselves the objects of discrimination. They have invested millions of dollars in elevator property, and performed services for which they never have received, but should receive, just compensation. They have provided facilities which are matters of necessity to both roads and farmers, for without them the roads and farmers would be powerless to take care of and transport the immense grain products of the country. Their elevators are kept open at times of the year when the expenses of maintaining them largely consume the profits of the busy season, for the convenience of the public. Such action as is proposed would encourage the building of new and better elevators with increased facilities for storage and handling, work no injury to any one, and is a matter of simple justice.

It is urged that dealers of other states take similar action, and by uniting and working in harmony make it possible to secure the recognition of rights which are justly due.

The convention adjourned to meet at Topeka, Kan., on July 1 at 8 o'clock P. M. It is believed that this will be the largest and most representative meeting of elevator men ever held in the West. The presence of representatives from adjoining states who are the owners of country elevators and in sympathy with a movement looking toward the best interests of the trade, is especially desired. Your experience, your indorsement and your council will be needed and appreciated.

PRICE IRREGULARITIES.

One cause of price irregularities in breadstuffs appears to be the want of a complete system of agricultural statistics to cover all countries contributing to the general supply or consumption. After all, it would be impossible to devise a plan even in theory that would always hold values at the same level. In a general way it is true that the universal level is pretty well established throughout the world for the same period, while there cannot well be a general level for different times.

Freight matters have been greatly improved in different ways, until the rate from any given point to the chief importing center fixes the relative value of wheat more especially, and to a less extent the price of other cereals for a given time. When it comes to different seasons there are many things that vary prices, such as short or long crops of all cereals, small of some and large of others, or changes in the importing or exporting centers, altering the relations that different countries bear to them, besides the relative values of other things, sometimes taking their places, or rates for money, etc.

The American corn exhibit at the Edinburgh Exposition is attracting a great deal of attention. The newspapers give it considerable space, and the people are becoming deeply interested in this simple and cheap food. While this one exhibit may not stimulate the exportation of corn to any appreciable extent, it shows that all we need to do to improve our foreign corn market is to bring the food value of the cereal forcibly to the attention of the European nations. America can afford to send a corn show to every important exposition held in Europe during the next five years. Once introduced, corn will become a staple article of diet among the poorer classes of the Old World.

Queries and Replies.

Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column.

No. 14. Do Belts Need Rest?—Is it injurious to belt to leave them tight on pulleys when at rest? If so, why? Is it not worse for quarter twist belts than for straight ones? I would like to have the experience and ideas of some practical men given in the columns of the AMERICAN ELEVATOR AND GRAIN TRADE.—S. A. C.

No. 15. Speed of Machinery, Size of Pulleys, Etc.—Suppose I have a shaft running 270 revolutions per minute. I wish to drive a machine from this shaft to run, say 700 revolutions, and the machine has an 8-inch pulley, what is the best rule to find the proper size of pulley for the shaft to drive the machine?—A READER.

No. 16. To Remove Garlic from Wheat.—In reply to No. 10 in your last issue, would say that I think the only successful way of removing garlic from wheat is that of passing the wheat between two flexible surfaces, having sufficient resistance to crush the garlic, but not to break the wheat grains. At least, this is the best way I have ever seen or heard of.—EXPERIENCE.

No. 17. Shrinkage of Wheat.—If J. H. K. will carefully measure out a peck or a half bushel of the wheat received for storage, and place it in a thin cotton or linen bag, tie it up securely, and then place it in the bin with the rest of the wheat received. By re-weighing this bag of wheat when the farmer wishes to sell or remove his wheat he can determine the exact amount the wheat has shrunk.—J. K. SMITH.

No. 18. Wood or Coal for Fuel.—Will some reader of the AMERICAN ELEVATOR AND GRAIN TRADE give some information as to which is the cheaper for fuel, wood at \$1.75 per cord or nut coal at 10 cents per bushel? We are using a 28-foot 42-inch two-flue boiler, with 12x20-inch slide valve Atlas Engine. Will some one who has had actual experience inform us how much saving it would be to us to put in a good tubular boiler?—IOWA.

No. 19. Transmitting the Power of an Engine.—A friend and myself got into a discussion in regard to whether it would make any difference in the amount of power obtained from an engine when attached to the line shaft by crank or by belt. My friend claims that you will get the most power by belting onto the line shaft, but I think it would not make any difference whatever. I may be mistaken in this matter, but I want to find out.—J. A. R.

No. 20. Loss on Wheat in Storage.—In reply to Query No. 9 in the May issue of the AMERICAN ELEVATOR AND GRAIN TRADE would say that J. H. K. had better experiment with a sample of the very wheat which the farmer stores in his elevator, otherwise he is not likely to deduct the correct amount for shrinkage. At different periods of its existence grain shrinks more or less, as it is young or old. Different lots and different kinds of wheat raised in the same locality, will shrink different amounts, under like circumstances. The only sure way to determine the amount to deduct for shrinkage is to place a certain small quantity of the same wheat in the elevator where it will be subjected to the same influences as the rest of the farmer's grain in store. The amount the certain small quantity shrinks can easily be determined at any time by weighing, and from that amount the shrinkage of the farmer's grain can easily be computed.—I. KNOWS.

The "warehouse plan" for loaning money by the government, which in effect is to establish county warehouses under charge of government agents, where grain could be stored and money loaned on it at low rates of interest, meets with some favor. The theory is wrong, and no such scheme would be practicable.—*Drovers' Journal*.

The report of T. C. Friedlander, secretary of the San Francisco Produce Exchange, shows that on June 1 the stock of grain in California was 4,801,063 centals of wheat, 1,004,457 centals of barley, 61,235 centals of oats, 91,111 centals of corn, and 15,892 centals of rye, against 2,092,430 of wheat, 2,052,630 of barley, 119,245 of oats, 38,925 of corn, and 10,215 of rye on June 1, 1889.

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ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., JUNE 15, 1890.

COUNTRY GRADING IN MINNESOTA.

Elsewhere we give an article on "Country Grading," sent us, presumably, by the writer. The author is very inconsistent, and either ignorantly or intentionally makes false statements. He is inconsistent in that he applies what he says is known as the "terminal inspection laws" to the country buyer and calls the country buyer an imposter, and seems to think that he should be severely punished for doing what unauthorized persons are forbid to do at the three grain centers of the state.

Any one can inspect grain outside of these points, but it is not compulsory, and we doubt very much that any country buyer inspects grain and issues a certificate in the regular way. Country buyers may, for the sake of convenience in buying, classify wheat according to the standard grades in force at the Minnesota grain centers, but they see the grain when they buy it, and will not depend upon another buyer's inspection for the quality of the wheat.

The system of "New Process" is not new, nor was it introduced by Ananias. Minnesota, nor any other grain-growing state, has such an "incubus" as compulsory or official country inspection fastened upon it, but they all have unprincipled farmer agitators, and selfish, windy demagogues that do more than all else combined to rob the farmer of peace and contentment.

CONTRACT WHEAT AT NEW YORK.

After several months' agitation the New York Produce Exchange has decided to make No. 1 Northern Spring Wheat deliverable upon contract and have adopted new rules, to take effect on all transactions made on and after July 10, for delivery on and after Oct. 10, 1890.

This is good news for the Eastern millers who look to New York for their supplies of wheat, for the stock of No. 1 Northern will by this action of the Exchange be increased at New York, and millers can more easily secure good milling wheat. Many Northwestern holders of No. 1 Northern would undoubtedly prefer to hedge on the New York Exchange against their holdings, and now that the Exchange has made this grade of wheat deliverable upon contracts, they will do it. New

York dealers will also be more willing to handle No. 1 Northern now that they can hedge against it, and this will tend to increase the stocks there.

The change will probably increase New York's wheat trade, and surely make it more difficult for speculators to run a corner in wheat on the New York market. This will be to the advantage of both the Western shipper and the Eastern miller. Few, if any, faults can be found with the change, and it will be to the interest of all save the cornerers of wheat.

COMPULSORY ELEVATOR SERVICE AT TERMINALS.

The Canadian railways running into Montreal have notified the Corn Exchange of that city that in consequence of frequent and extensive frauds having been practiced upon them by shippers underbidding weights, they have found it necessary to issue instructions to their agents to refuse to accept any more grain in bulk for track delivery, and that hereafter all grain will have to be sent through their elevators.

No one will deny the railroad companies the right to put a stop to underbidding, but when they refuse to accept any grain for track delivery at Montreal, and demand that it shall all be sent through the elevators at owner's expense, they go beyond their power and discriminate directly against grain. If railroad companies desire to weigh each car of grain in a hopper scale in their own elevators at terminal points, without cost to the owner, no one will object. They can store the grain in special bins for six or seven days, too, as in the case of other commodities, but we assure them that the country shipper will raise no serious objections.

Such a ruling is not only a discrimination against grain, but it is an outrageous discrimination against Montreal and other points where these railroads have grain elevators, for it will keep much grain from going to these points. If the matter is taken into the courts the railroad companies will undoubtedly have to annul the order or give the elevator service free. By means of a transfer house equipped with a number of good hopper scales the railroad companies could accurately determine the weight of bulk grain more cheaply and quickly than by running it through their elevators, or if the railroad companies will purchase first-class track scales and place them under cover, they can weigh the grain accurately enough for billing purposes.

NORTH DAKOTA INSPECTION.

North Dakota's last legislature felt duty bound to do something to help the farmer, and among other laws, passed one which will surely help the farmer—to spend his money. The legislature passed a law providing for state inspection and weighing of grain at four terminal points—Fargo, Grand Forks, Wahpeton and Fairmount—and appropriated the munificent sum of \$500 for carrying out the provisions of the law. It only cost Minnesota \$6,000 to get its inspection department in operation at three points, and Dakota will not be able to do it for any less.

North Dakota farmers will not gain anything by having grain inspected at these four points. Grain passing through these points will be taxed for one more inspection and one more weighing before reaching the consumer. The price paid for grain in these four markets will be governed by the Minneapolis market, for the bulk of the wheat produced in North Dakota and shipped out is ground up at Minneapolis. Minnesota grades and prices will be of more consideration to the dealers at these points than the official grades established by the North Dakota Inspection Department. This being the case, the inspection of grain at these points is a useless expense, and will be paid for by the producer alone.

Little of the grain consumed within the state will go from producer to consumer via either of these four points unless the producer has no faith in his judgment of the value of the wheat or the judgment of the would-be purchaser, and will

ship his grain direct to one of these four points to have the inspectors officially declare the quality of the wheat. The bulk of the grain produced in the state is consumed without the state, and invariably goes to the consumer by way of outside grain centers. So grain dealers will avoid the inspection centers within the state, and ship direct to those who want it.

THE WHEAT SAW-FLY.

A correspondent at New Holland, Ill., has sent in some stalks of wheat infected with the wheat saw-fly larvæ. He says they are very thick in Logan county, and telegrams from Bloomington state that saw-flies are devouring the wheat at a rapid rate. In some wheat fields as many as seventeen larvæ have been taken from a single stalk. The work of destruction is done by the larvæ, which, as was shown by illustration in our last issue, bore out the center of the stalk. Soon after they attack a plant it fades, the leaves droop and become yellowish.

Reports from several different districts in Illinois and from Tennessee state that considerable wheat is being destroyed by this insect. A recent report from Logan county, Ill., states that no wheat field had yet been found which was free from the attacks of this parasite.

The larva incloses itself within the stump of the straw after it has accomplished its work of destruction, and remains there until the following spring, when it is transformed into a saw-fly, which in turn lays a great many eggs in the wheat stalk. In some cases they have been successfully exterminated by first giving the field a dressing of lime, or mixing nitrate of soda, spirits of tar or rape cake with the soil, and then giving it a hard rolling.

The parasite, according to reports, is also doing some work in Michigan and Indiana, but has not destroyed as much wheat as in the states mentioned in the foregoing.

NEW INSPECTION RULE.

During the present crop year considerable trouble has been caused by the making of a new standard grade of wheat in Illinois, and the Board of Railroad and Warehouse Commissioners have recently made a new rule, which will prevent any such trouble in the future.

The new rule adopted is that all grain in store in any warehouse of class "A" at the time any amendment to be established for rules of inspection (affecting such grain) may hereafter go into effect shall be inspected out (in satisfaction of warehouse receipts dated prior to that time only) in accordance with the rules as they stood prior to such amendment.

It has always been the custom to inspect grain out as it had been inspected in, regardless of any change in the rules of inspection. Only recently a large dealer at Chicago made a strong effort to have the inspectors grade a lot of wheat the same until it had been shipped away from Chicago and outside the jurisdiction of the Chicago inspection department. When the change in the rules went into effect the market value of 300,000 to 400,000 bushels of wheat was changed.

A dealer sought to transfer a quantity of this from one elevator to another, and was informed that it would be inspected out as it had been inspected in, but when inspected into another house it must be given another grade, according to the amended rules. The case was appealed to the Warehouse Commission and the decision sustained. The new rule is very explicit, and there is no way of getting around its provisions.

As soon as the government establishes farm produce warehouses, the farmers will petition it to buy the elevators they have built for their own use, and if the government don't buy them it will be asked for damages. When the government drives individual enterprise out of any line of business it should be made to pay damages, especially if the gentleman whose business is destroyed is running a farm as a side issue. Such is the logic (?) of the farmer agitator

THE CONCORDIA MEETING.

The meeting of elevator owners and lessees at Concordia, Kan., an account of which is given elsewhere, was a success in every way. An association was organized, a constitution and by-laws adopted, officers elected, committees to work for the abolishment of a great wrong which has been imposed upon elevator men for a number of years, were provided, and another meeting was called for July 1 at Topeka, Kan.

This is a move in the right direction, and one that should have been taken years ago. The elevator and grain men have long suffered from many abuses which could have easily been done away with by organizing an association and working together for their abolition. The interest taken in the Concordia meeting, the enthusiasm and the spirit shown evidences a determination on the part of the prime movers that is not to be checked by a few failures.

Their method of securing justice from the railroads is the best. They have gone about it in a direct way. They recognize the fact that the trade is suffering from more than one wrong, and in time will work to have all abuses abolished, but at present they wisely propose to make a specialty of one grievance—the discrimination of the railroad companies in favor of track buyers and against elevator men.

In this they should have the hearty support of every owner and lessee of a country elevator. Not only should every elevator man join the association and bear a small part of the expense, but each one should strive earnestly and sincerely to help along the work of the association.

We should have a national association of elevator and grain men as well as state and local organizations. There is no other business interest in the entire country, with one per cent. as much capital invested, but has well-organized associations, and there is no reason why elevator men should not have strong associations. There are many cogent and obvious reasons why they should organize associations. Self interest alone should be enough to prompt dealers to organize. Let all attend the Topeka meeting.

A PROPER MEASURE.

The Chicago Board of Trade has amended its rules so that Section 1 of Rule 21 now reads as follows:

All deliveries upon contracts for grain or flaxseed, unless otherwise expressly provided, shall be made by tender of regular warehouse receipts, which receipts, except in the case of flaxseed, shall have been registered by an officer duly appointed for that purpose. All such warehouse receipts shall be made to run five days from date of delivery on regular or customary storage charges, which regular or customary charges shall follow such warehouse receipts and be chargeable upon the property covered by the same, and shall be issued by such houses as have complied with the rules of the Board of Trade and the regulations and requirements of the board of directors, and have been declared regular warehouses for the storage of grain or flaxseed by said board of directors; and it shall be the duty of the board of directors, prior to the first day of July in each year, to inspect all warehouses the proprietors or managers of which shall apply to have their receipts declared regular for delivery on contracts under the rules of the Board of Trade, and no warehouse shall be declared a regular warehouse unless it is conveniently approachable by vessels of ordinary draft and has customary shipping facilities, and unless the proprietors or managers of such warehouse are in good financial standing and credit, and are carrying on and intend to continue to carry on the legitimate business of public warehousemen under the laws of the state of Illinois and in accordance with the rules of the Board of Trade of the city of Chicago and the regulations and requirements of the board of directors; nor until the proprietors or managers of such warehouse shall file a bond with sufficient sureties in such sum and subject to such conditions as may be deemed necessary by the board of directors under the rules of the Board of Trade and the regulations and requirements of the board of directors in reference to warehouses. Warehouse receipts for warehouses so declared regular by the board of directors shall be regular for delivery on contracts under the rules of the Board of Trade so long as the said warehouse shall continue to be a regular warehouse, but the term for which any warehouse is declared a regular warehouse to issue such receipts shall be limited to and expire on the first day of July in each year. No receipts issued on grain received in any warehouse shall be regular for delivery under the rules of the Board of Trade after that date unless the warehouse upon which it has been issued has again

been declared a regular warehouse by the board of directors; provided, however, that receipts issued before the first day of July by warehouses which have been regular warehouses during the preceding year but which have not been declared regular for the succeeding year, shall be regular for delivery upon such contracts for sixty days after the first day of July; but nothing contained herein shall prevent the board of directors from declaring any warehouse or the receipts thereof irregular at any time for violation or non-compliance with the laws of the state of Illinois or any of the rules of the Board of Trade or of the regulations or requirements of the board of directors. Provided, that the board of directors shall have power, when in their judgment an emergency exists requiring more storage room than can be supplied by the regular elevator warehouses, to declare any storehouses, vessels or places suitable for the storage of grain or flaxseed within the city limits—wherein the cost of delivery to vessels or railroad cars shall not be greater than such as is made by the regular elevators for the same service—to be regular places for the storage of grain deliverable under the rules of the Board of Trade.

The abuses which called forth this amendment to the rules are notorious. The amendment is timely, and it is to be hoped that the Board of Directors will not hesitate to enforce it against all, no matter how powerful or influential they may be.

IT IS ALL STRAIGHT.

In a recent issue the Chicago *Herald* openly and explicitly charged that the Illinois State Crop Department was leaking valuable information to parties who paid for it. The charge made was reiterated in a score of papers. Now comes Mr. W. C. Garrard, secretary of the State Board, and denies explicitly and without reservation, each and every item of the indictment. Mr. Garrard denies that an iota of information has ever been given to St. Louis papers or speculators, in advance of the general public. The *Herald* makes a handsome apology to Mr. Garrard, as was his due, and "all is quiet along the Potomac."

THE GOVERNMENT CROP REPORT.

The statistical returns of June to the Department of Agriculture include preliminary estimates of the area of wheat, both spring and winter, and its condition. While several states increased the area of winter wheat last autumn, the heavy reduction by plowing and planting in other crops to replace the winter wheat killed in Illinois and Indiana and a limited extent in two or three other states, has reduced the acreage in every wheat-growing state of any prominence except Kansas and Oregon.

The percentages represent the actual area now growing, in comparison with the acreage harvested last year, and include all that was seeded last fall except what has been replaced by other crops; The general average is 91.2, a reduction 8.8 per cent. of last year's winter wheat area.

The percentages of the principal states are as follows: New York, 98; Pennsylvania, 99; Virginia, 97; Georgia, 88; Texas, 75; Kentucky, 94; Ohio, 95; Michigan, 90; Indiana, 89; Illinois, 76; Missouri, 96; Kansas, 109; California, 80; Oregon, 103.

An increase in acreage of spring wheat is reported, except in Wisconsin and Dakota. The percentages are: Wisconsin, 97; Minnesota, 118; Iowa, 104; Nebraska, 105; the Dakotas, 95. There is also increase in Colorado, Washington, and the territories. The general percentage is 103.8.

Taking winter and spring wheat together the percentage of last year's breadth is 95.4, showing a net loss of nearly one and three-fourths millions acres. The estimated area of 1889 was 38,123,859 acres.

Condition of growing wheat has declined from 80 to 78.1 since the 1st of May. Slight improvement is noticed in New York and Pennsylvania, and in Ohio and California.

Condition of wheat in Indiana, Illinois and Texas remains at the same low figures of last month.

Decline is apparent in Michigan, Missouri and Kansas, and in nearly all the Southern states. The plants are generally thin on the ground and lacking in development. The patches of bare spots are more conspicuous as the season pro-

gresses. The averages of condition of principal states are: New York, 93; Pennsylvania, 98; Virginia, 87; Georgia, 55; Texas, 67; Tennessee, 72; Kentucky, 86; Ohio, 84; Michigan, 69; Indiana, 63; Illinois, 64; Missouri, 77; Kansas, 80; California, 86; Oregon, 91.

The following are some of the spring wheat percentages of condition: Wisconsin, 82; Minnesota, 97; Iowa, 93; Nebraska, 85; Dakota, 90; Colorado, 99. The average of the entire spring wheat breadth is 91.2.

The reported area of oats is 98.7; condition, 89.8. Area of barley, 98.1; condition, 86.4. Area of rye, 98.5; condition, 92.3. Area of clover, 100.7; condition, 95.1.

DISCRIMINATION AGAINST ELEVATOR MEN.

It has long been the custom of railway companies to furnish a house at all stations along their lines to receive freight. It is also the custom for them to load and unload all freight but grain. Some railroad companies have been generous enough to grant a site and build a sidetrack along houses built by dealers. Other companies, recognizing the fact that the elevator men were loading, unloading and furnishing a storehouse for the principal commodity shipped over their line, have granted them a rate of two to five cents less per hundred pounds than that given to track shippers. In some places this has been stopped by the enforcement of the Inter-State Commerce Law and state railway laws.

The Iowa Railroad Commission had some trouble with this question last year, and in some places the railroads were finally compelled to give the farmer the same rate on track shipments as they gave to the elevator men on grain loaded through their elevators. These elevators are erected at the expense of private individuals without any compensation whatever. They are a great convenience to the farmer, for he is not compelled to haul a carload of grain to the nearest station in a day, but he can sell it in small lots as he needs the money, or as it is convenient for him to haul it to the station.

Elevators increase the business of the railroad companies and do away with the necessity of their hauling cars over their tracks only partially filled with grain. More grain is shipped, because elevators make it easy for owners of less than carload lots of grain to market it.

It cannot be denied that it is greatly to the interest of the farmer and the railroad to have a good grain elevator at every station. Railroad companies acknowledge this when they encourage the erection of elevators by granting a site. Why they seek to destroy the business of the elevator man after they have encouraged him to build, is not clear, but they are surely working against his interest and their own as well, when they give the track shipper the same rate as they give the elevator men.

If the railroad companies do not wish to give different rates from the station, let them prevent this discrimination by giving elevator men two or three cents a hundred pounds on all grain shipped from their elevators. This would work injustice to none and do away with much of the track shipments of grain, which is a source of great annoyance to the railroad companies.

THE SLAUGHTER OF THE BUCKET SHOPS.

For weeks a common head-line in the daily papers has been "Failure of a Bucket Shop." How many of these institutions have failed in the past six weeks, is not a matter of record; but taking them large and small, the number that have gone under since May 1 cannot well be less than eight hundred. And their failure is a thoroughly good riddance to the community at large. They are gambling institutions pure and simple; and while some grain men have put them to a legitimate use, in the way of insurance, there are few that will lament their decadence and fall. It is significant of the amount of money that these insti-

tutions have handled that it is estimated that the Western Union Telegraph Company loses an income of a million dollars a year by the failure of the numerous shops and their "branches" that have bitten the dust in the past few weeks. How many of these concerns survive, we do not know; but an upward tendency in the market, continued for a few weeks, will wipe out the last of them.

Editorial Mention.

ATTEND the meeting of elevator men at Topeka, July 1, and work for the advancement of the trade.

SILVER is still above the average of what it has been for several years past, and India and Russia grain exporters are unable to make as large profit as heretofore.

WE give elsewhere the views of Senator Carlisle on the subject of government pawn shops, which no intelligent person, not even a farmer, can peruse and still be a friend of that crazy scheme.

At a meeting of the belting manufacturers of the United States held at Chicago May 22, it was decided to notify all dealers that prices would be raised and that the new list would go into effect July 1.

If one per cent. of the charges made against the elevator and grain men of the Northwest by that unprincipled sheet called *Great West* were true, there might be some need of such fire-eating methods as are continuously proposed by the editor and his flock of demagogues. The sheet is published for political purposes, and not in the interest of the farmer.

BREWERS, malsters and others interested in the barley trade are strongly opposing the proposed increase in the duty on barley. If the American farmers want the home barley market retained for their special benefit, they should take care of it and produce enough good barley so that it will be unnecessary for this country to import large quantities every year.

A. P. DICKEY MANUFACTURING COMPANY of Racine, Wis., has just equipped Elevator "D" of the Lake Superior Company at Duluth, with fourteen of the Soule Anti-Choke Machines. Both parties to the deal are to be congratulated. The one party now has fourteen excellent devices, and the other an additional testimony to the value of their device to mills and elevators.

OCEAN freight rates on grain continue to decline, and yet the carriers are unable to get as much as desired. Recently the rate on grain from New York to Liverpool was 1d. by steam, for prompt delivery. If the decline continues much longer the ocean transportation companies will again be taking grain for ballast, instead of at the exorbitant rate charged last fall and winter.

MESSES. THORNBURGH & GLESSNER, 18-22 N. Clinton St., Chicago, are giving to their friends an ingenious base ball score card, on which the lover of the national game can keep tally on the runs, errors, base hits, etc., by means of ivory pointers. The card will last a whole season. Messrs. Thornburgh & Glessner will be pleased to send the card to those who apply for it.

If you want to receive just treatment at the hands of the railroads, if you want all of your grain delivered at its destination, if you want the unjust discrimination in favor of track buyers abolished, and numerous other abuses from which

the grain trade is suffering done away with, attend the grain dealers' convention at Topeka July 1, and help along the work of securing it.

WHEN the government appropriates \$16,000,000 to erect farm produce pawn shops, it had better appropriate at the same time about \$100,000,000 to pay the grain dealers and elevator owners of the country for the destruction of their business and loss of capital invested in same. It will save the expenses of litigation, and enable the grain dealers to go into some other business immediately.

EVERY grain dealer of the West should attend the grain dealers' meeting at Topeka, Kan., July 1, and help the good work along. If it is impossible for you to be present, send a letter to Secretary Caywood at Clifton, Kan., and let the dealers who will be present know that you favor a strike for justice, and will help them to obtain it. Don't hang back and allow the others to do all the work, but be up and ready to help advance the interests of your own business.

THE style of Webster & Comstock Manufacturing Company of this city is changed to Webster Manufacturing Company. This change of name is now attended by a change in location. Large as their old quarters were, they long since became inadequate. So the office and salesroom of the company have been removed to 195 S. Canal St., and the factory from 123-127 Ontario St. to Nos. 1075 to 1097 West Fifteenth St. We shall have something to say of this new and model establishment in the future.

WE are not receiving as many communications as we desire; in fact, the members of the trade are entirely too backward in communicating their views. THE AMERICAN ELEVATOR AND GRAIN TRADE is published in the interest of the elevator and grain men, and we want all to make use of it. If you have anything new or of interest to the trade let them have it through our columns, for by that way you may reach the greatest number and do the most good. If you desire any information make use of our columns.

THE HEIDENREICH COMPANY, elevator builders of Chicago, have sent to their customers in Russia this month two Monitor Separators and two extra large Morgan Oat Clippers. This company besides being elevator builders also take contracts for railroads, public works, warehouses, etc. At present the company is doing extensive grading for the Wisconsin Central Railroad, and building a \$30,000 warehouse for the Lehigh Valley Transportation Company at Chicago. It is also doing considerable local contracting.

ATTENTION is called to an amendment recently adopted by the Chicago Board of Trade, which appears on another page in this issue. One object of the amendment is to give the directors full power to compel the public warehousemen to comply with the laws of the state, the rules of the Board of Trade and the regulations of the board of directors. If they succeed in preventing the public warehousemen from dealing in grain stored in the public elevators they will receive the sincere thanks of the entire trade. Outside dealers have had to take "skin" grade grain long enough.

WE are glad to again present in another column of this issue an advertisement of S. E. Worrell's Improved Grain Driers. These machines have been in successful operation seven years, and have proved to be very economical in use. They are drying their product for the trifling expense of one-half cent per bushel. During the past two years they have been extensively adopted for drying wet sand—a very difficult material to handle cheaply—and are already considered a superior machine for this purpose. Mr. Worrell has just completed a large drier, having a capacity for nine tons of sand per hour, for an old silica mining company of Utica, Ill., which will

be the third one he has supplied to different parties in that neighborhood. With the view to attain the greatest perfection in these machines the builder has recently added some important but simple improvements that increases their efficiency. Owing to better manufacturing facilities and to induce increased sales prices have lately been materially reduced, so that the machines are now claimed the cheapest driers in use. For prices and description address the patentee and sole manufacturer, at Hannibal, Mo.

THE Northern Pacific and the Great Northern Railway Companies have refused to grant Gautier de Ste. Croix permission to erect elevators along their lines in Minnesota, and that gentleman, who represents an English syndicate, has appealed to the State Board of Railroad and Warehouse Commissioners. Some time ago Mr. Ste. Croix's syndicate was to erect a great "farmers' elevator" at Duluth, from which grain was to be shipped direct to Liverpool. It, or many other elevators Ste. Croix talked of building, have not yet been erected, but he has got considerable free advertising on the strength of his schemes.

WE acknowledge the receipt of a copy of Messrs. C. Reuther & Reisert's illustrated catalogue of their new "Chronos" Automatic Grain Scale. This catalogue, which will doubtless be welcomed by the interested trade, contains numerous illustrations showing the application of these weighers in almost every conceivable shape, as well as for a variety of purposes in flour mills, elevators, floating elevators, breweries, malt houses, cement works, railway stations, etc. A large number of testimonials from many very prominent European firms are also given, showing the high estimation in which this weigher is held, on account of its reliability.

WESTERN grain shippers, who have been paying the running expenses of the Baltimore Corn and Flour Exchange by patronizing its inspection department, will be pleased to hear that an amendment to the by-laws of that institution has been proposed, which if adopted will cause a material reduction to be made in the charge for inspection at that point. For several years the Exchange has made big money out of its inspection department, and it can well afford to inspect grain for a less charge in the future. If much of a reduction is made New York and Philadelphia will have to reduce their charges also, or their business will be greatly reduced and Baltimore's increased.

B. F. RYER, 63-65 South Canal street, Chicago, Ill., manager of the Western branch of Messrs. Huntley, Cranson & Hammond, Silver Creek, N. Y., has lately closed a contract with Messrs. Simpson & Robinson, Minneapolis, Minn., for the necessary grain separators to be placed in the 1,000,000-bushel elevator now being built by Messrs. Simpson & Robinson at Kansas City, for Messrs. F. H. Peavey & Co. of Minneapolis, Minn. This elevator is to be a model house in every respect, and is attracting much attention among grain dealers. The machinery has all been selected with the one idea of getting the best. When fully equipped this elevator will contain eight of the largest size Monitor Separators.

ANOTHER fool scheme has been introduced in Congress for the benefit of the poor, dependent farmer. The originator of this scheme is the Governor of Nebraska, or one of his political heelers. The bill provides for the inspection and storage of grain for inter-state shipment. All railroad companies engaged in inter-state commerce by the terms of the bill are required to construct elevators and storehouses for the storage of such grain along their respective lines at places to be designated by a state board. The President is authorized to appoint one chief inspector of grain in each state and territory, and the Secretary of Agriculture may appoint such assistant inspectors as may be required to carry out the provisions of the act. The inspection fees shall be fixed by the Secretary of Agriculture.

ure. Vermont, Idaho, Alaska and other districts where the people have not found it necessary to provide for the inspection of grain are sadly in need of grain inspectors. It may be all right to compel the railroads to construct elevators and houses for the storage of grain along their lines where there are none, but it is a great injustice to elevator owners to compel railroads to construct houses at the same station where private parties have one or more.

ONE of the laws recently passed by the North Dakota Legislature requires elevator men to pay an annual license of \$250 per 1,000 bushels' capacity of their elevators, on Aug. 1 of each year. The law, of course, was passed to satisfy the farmers, but the legislators were so blinded by prejudice that they were unable to see that a tax upon the grain trade is a tax upon the farmer. It is said that the elevator men will retaliate by refusing the fifteen days' free storage heretofore allowed where grain was taken to the elevator and not sold. In such an event farmers say they will petition the railroad companies for side-tracks, platforms, and cars and do their own shipping.

FOR distributing all kinds of grain and mill of-fal throughout New England, no Eastern house has better facilities nor is better known than Chas. M. Cox & Co. of Boston. Their trade in car lots extends from New Brunswick to Buffalo, and as their purchases are always ordered direct from the mills to their customers, they are able to handle a vast quantity at small expense. The firm is composed of Chas. M. Cox and F. A. Willcox, both young and energetic men, and they not only have the good will of a host of Eastern customers, but are well known by a large number of mills and shippers in the West. The business was started in 1886, and has since been developed to its present proportions by fair dealing and push, backed by Eastern capital. Millers who have a surplus of feed will find a market in the East at all times of the year.

NO GRAIN center has as many transfer houses equipped with first-class hopper scales as are needed, and some have none. This is a stingy imposition which causes grain shippers to lose considerable grain every year. The grain traffic is a source of greater profit to the railroads than any other, and for that reason, as well as many others, it deserves better care than the railroad companies are giving it. When grain is transferred from the cars of one road to those of another by the aid of a first-class transfer house, the expense is light and the loss of grain nil. Otherwise the shipper usually loses several hundred pounds of grain. If the grain shippers along any line of road, at the terminal of which their grain is transferred to the cars of another road, will band together and demand the erection of a transfer house, which they are justly entitled to, they will get it. In few cases will they get it otherwise.

THAT WAREHOUSE BILL.

The telegraph brings the welcome news that both the Republican and Democratic members of the committee have agreed to report adversely the bill providing for farmers' pawnshops in the way of national depositories for grain. The public, farmers not excepted, are to be congratulated on the outcome of this Quixotic bill. No matter what the pressure may be in some localities, the advocacy of such a socialistic measure would prove fatal in the end to any party that adopted it. The farmer may be as badly off as the demagogues tell us; but that does not prove that his remedy lies in having the public carry his business. It might be well on general principles to have such a law passed, simply to show that it would injure the class it proposes to help; but fortunately, the American people are not in need of any such drastic measures. The principles of government adopted by our fathers are not yet forgotten.

DOTS AND DASHES.

Iowa's corn crop will fall far below that of last year.

The exhibit of cereals at the Columbian Exposition, to be held in Chicago in 1893, will exceed anything the world has produced.

The Illinois Threshers' Association has fixed prices for the season as follows: Wheat, 4 cents a bushel; oats, 2 cents a bushel; shelling corn, 1½ cents a bushel.

Be sure and attend the meeting of grain dealers at Topeka, Kan., July 1, as matters of importance to all country dealers will be brought before the meeting.

The Hessian fly has attacked the wheat fields about Greenview, Menard Co., Ill., by millions, and many farmers are already plowing the wheat for other crops.

The aphid, or grain louse, which did so much damage to the wheat last year in Ohio, Indiana and Illinois, is reported to be working in the wheat near Kalamazoo and in other parts of Michigan.

The United States imported 693 tons of manufactured flax during April, against 937 tons for April, 1889. During the ten months ending with April 5,897 tons were imported, against 6,123 tons for April, 1889.

R cent advices from Tazewell county, Ill., report some of the oat fields looking brown, and the crop almost a failure in many fields. The same letter also spoke of much wheat being cut off by some insect.

The first wheat of the 1890 crop received at San Francisco arrived May 20, and was sold at \$1.30. It was shipped from Poso, Kern county, Cal., on May 17. This is the earliest wheat ever received at San Francisco.

The *Mexican Financier*, published at the national capital of our neighbor republic, says: "Large quantities of corn grown in the state of Kansas have recently been brought down over the Central Railway to Escalon."

Seth Cobbeth, a prominent farmer in the vicinity of Hudson, Wis., is under \$500 bonds on a charge of stealing grain. He will probably plead for leniency on the ground that a scheming grain buyer put him up to it.

During April we exported breadstuffs valued at \$4,890, against \$14,625 for April, 1889, and for the ten months ending with April the broom corn exports were valued at \$88,207, against \$129,685 for the same period of 1888-'89.

We are indebted to Mr. W. T. Caywood of Clifton, Kan., secretary of the Kansas and Nebraska Grain Dealers' Association, for the report of the meeting of grain dealers at Concordia, Kan., which appears elsewhere in this issue.

The United States exported 4,999 tons of hay during April, against 2,744 tons for April, 1889, and during the ten months ending April 30, 1890, 28,545 tons were exported, against 16,309 tons for the ten months ending April 30, 1889.

The flaxseed imports for April amounted to 286,600 bushels, against 376,390 bushels for April, 1889, and during the ten months ending April 30 we imported 1,852,623 bushels, against 2,203,703 bushels for the ten months ending April 30, 1889.

The receipts of grain at San Francisco during May were as follows: Wheat 1,155,346 cents, barley 172,083 cents, oats 66,098 cents, corn 16,072 cents, and rye 6,612 cents, against 887,630 cents of wheat, 116,214 of barley, 33,197 of oats, 25,525 of corn, and 1,097 of rye for May 1, 1889.

A recent dispatch from Galesburg, Ill., says: "The new oat pest, which are very small green bugs, have so increased during the last twenty-four hours that they now almost completely cover every blade of the plant. The crop will be a total failure."

The total receipts of wheat at Chicago, Milwaukee, Minneapolis and Duluth from June 30, 1890, to June 7, 1890, were 86,145,000 bushels, against 61,935,000 bushels for the same period of 1888-'89, and 82,770,000 bushels for same period of 1887-'88.

The United States imported 11,505 tons of hay during April, against 7,329 tons for April, 1889, and during the ten months ending with April 105,270 tons valued at \$978,051 were imported, against 87,019 tons valued at \$891,257 for the ten months ending April 30, 1889.

In Eastern Canadian markets millers have it nearly their own way, as they hold nearly all of the available good milling wheat. In this province only a few straggling loads at several of the outside points have been brought to market, the whole being insufficient to keep a

200-barrel mill running. The prices paid to farmers at outside points ranged from 91 to 93 cents.—*Winnipeg Commercial*.

Massachusetts Teacher—"For what is the city of Lynn noted?" Small Boy—"For its great amount of seed." Teacher—"Oh, no." Small Boy—"Then where does linseed come from?"—*Kearney Enterprise*.

A little five-year-old saw a weevil taken out of the buck wheat, and at breakfast he turned to his brother: "Willie, these ain't buckwheat cakes." "Yes, they are; why ain't they." "Because they're bug-wheat cakes."

The total receipts of wheat at St. Louis, Toledo, Detroit, Kansas City and Cincinnati from June 30, 1889, to June 7, 1890, aggregated 34,618,000 bushels, against 29,521,000 bushels and 29,583,000 bushels respectively for the corresponding periods of 1888-'89 and 1887-'88.

The North Dakota grain inspection laws are declared to be a dead letter because of insufficiency of the appropriation for putting them into effect. So long as most of the wheat grown in the Dakotas passes through Minnesota, for those states to establish separate grain inspection laws looks like a needless expense.—*Duluth News*.

Several small boys were before a Chicago judge recently charged with breaking into side-tracked cars of the Chicago, Milwaukee & St. Paul Railway and stealing grain. We should judge from the many complaints of shortages made by country shippers that there are about seven thieves for every car of grain received at Chicago.

As wheat continues on its glorious upward march toward the dollar goal, the bucket shops melt away like dew before the rising sun, and in this fact lies a striking illustration of the optimism of human nature. It is said that fully 80 per cent. of the people who take a ten-dollar "flier" on wheat buy in the expectation of higher prices. The other 20 per cent., who sell in the hope of lower values, are mostly professional hangers on and gamblers.—*Indianapolis Journal*.

A correspondent of the *Grocers' Criterion* writing from Brining, Neb., says: "We have some farmers' elevators through the country. I do not think they are a great success either, as many of their stockholders sell their grain to independent elevators or buyers for the reason that they get more for it. We have quite a number of cranky farmers throughout this country. These are the principal agitators of farmers' alliances. I call them anything but successful farmers."

Recent advices from Fargo, N. Dak., state that at least twice as much grain has been marketed since seeding was over as grain men expected was in the country. Several thousand bushels have been bought by the elevators in Cass county and about ten thousand bushels in Ransom county. The flouring mill alone at Valley City, in Barnes county, has received 16,000 bushels, and has now 9,000 more in sight, and even Stutsman county farmers have sold about 8,000 bushels of wheat since finishing seeding.

We are sorry to report a bad break in the wheat markets. The worms and the saw fly have left the wheat fields and attacked the wheat pits, and the markets look yellow and sick. Too many dealers want to sell out and realize profits—or losses—and whiz go the prices. It was ever thus. Long and confidential relations of friendship with grain markets are impossible. The markets will not stand hitched. They will slip their halter and run, and leave the confiding dealer to his fate.—*Toledo Market Report*.

J. W. Helm, proprietor of the "Danville (Ill.) Board of Trade," has again disappeared. When he was last seen he was on his way to Spokane Falls. Thus another bucket shop has gone to the wall. Helm created a sensation about a year ago by a mysterious disappearance. Parties dragged the creeks and searched the neighboring woods. He afterward turned up at Jacksonville, Fla.; and claimed he had been wandering about the country in a dream for over a month. Then, as now, creditors mourned his loss.

It is said that green midge is working again in the wheat fields of Indiana this year as it did last. How to exterminate this insect pest, as well as others, occupies the Washington Department of Agriculture a great deal. That department issues beautiful colored pictures of butterflies and coons and cocoons and chrysalids and pupa, but that don't kill the bugs. John Blair of South Dakota, a man of investigation, writes that they may be destroyed in the fall by shooting them before they lay their eggs.—*Minneapolis Market Record*.

THE EXCHANGES.

Memberships on the Chicago Board of Trade are selling at \$1.375.

A certificate of membership in the New York Produce Exchange is worth \$180; six years ago it was worth \$5,000.

The New York Produce Exchange held its annual election of officers Monday, June 2. The following were the successful candidates: Evan Thomas, president; Thomas P. White, vice-president; E. C. Rice, treasurer.

The Duluth Board of Trade has accepted an invitation of the officers to be represented at the meeting of the Western National Association of America at Minneapolis, June 17-21, and have chosen the following delegates: C. H. Graves, B. C. Church, F. S. Daggett, G. G. Johnson, Ward Ames, T. A. Olmsted and James C. Johnson.

The grain committee of the New York Produce Exchange recently reported in favor of making No. 1 Northern Spring Wheat deliverable on contracts for No. 2 Red. The report was adopted by a large majority. It is believed that making this wheat a tender upon contracts will greatly increase the business of the Exchange and benefit the grain trade of New York. The report declares the belief that this wheat can be stored as safely as red water wheat. The new rule takes effect on July 10. A minority report favored No. 1 Northern tenderable at 3 cents below contract wheat.

The *Chicago Market Report* recently published an article showing a decline in the price of memberships to a number of commercial exchanges, while those of the Toledo Produce Exchange had advanced. Among those given were the following: The New York Produce Exchange from \$1,800 to \$1,500. The New York Cotton Exchange from \$1,500 to \$1,200. The Chicago Board of Trade from \$2,000 to \$1,500 to \$1,150. Milwaukee Chamber of Commerce from \$200 to \$145. St. Louis Merchants' Exchange from \$115 to \$80. Detroit Board of Trade from \$300 to \$200. Toledo from \$250 to \$175 to \$145 and \$2,500 asked in 1890. What is the market worth today?

Business in futures on the local board has increased greatly during the past half, and promises a much larger volume during the last half. Trading here was almost exclusively limited to samples until quite recently, or for a short time of a year. Since then future trading has had some encouragement, and now the daily volume of contracts from 2,000,000 bushels to 8,000,000 bushels. There is no difficulty now in filling orders, with quite as much ease and satisfaction as at any other place. There have been attempts to bull or bear the market through the purchase or sale of a few 100,000 bushel lots, but the sort of attempts now create but a slight ripple.

At a special meeting of the directors of the Chamber of Commerce of Minneapolis, they adopted a resolution that the Chamber is heartily in favor of the proposition to make No. 1 Northern Spring Wheat deliverable on contracts for No. 2 Red in New York market, believing it would greatly increase business between members of the two exchanges and enable them to work direct with each other. In forwarding the communication to the New York Exchange, the directors say: "If the foregoing action is taken by your Exchange it will greatly facilitate securing by your New York members and exporters a superior quality of spring wheat at fair prices, and give our elevator companies in the Northwest better facilities for hedging in your market against their daily purchases."

An amendment to the by-laws of the Baltimore Corn and Flour Exchange has been proposed which will be looked upon with favor by all Western shippers who send grain to that market. It is that "the board of directors shall at its first regular meeting, fix the rates for inspection of grain for the following year, and shall endeavor to make the rates such as shall in its judgment not more than cover the expenses of the inspection department. The board shall keep a separate account of all receipts and disbursements of the inspection department, and the board shall fix such rates as will in its judgment meet the cost of any considerable surplus from receipts, and may consider a surplus of receipts of one year as a credit toward a reduction of charges in the next. If the board of directors will act with a sincere desire to inspect grain at the actual cost it will undoubtedly increase Baltimore's receipts of grain."

It is proposed to amend the by-laws of the Baltimore Corn and Flour Exchange so that the wheat and corn committee shall consist of five members, five of whom shall be millers, three exporters and one miller. At the election in July, 1890, three of each committee shall be elected for one year, three for two years and three for three years, and thereafter there shall be elected annually three members upon each committee for a term of three years. The committee on oats, rye and barley shall consist of five members, who shall, as far as may be possible, represent the several branches of trade. At the meeting in July, 1890, one shall be elected for one

year, two for two years, and two for three years, and thereafter there shall be elected annually, for a term of three years, one or two members, as may be necessary. Members of these committees to serve until their terms expire, and their successors are elected, and they are eligible for re-election. By this compromise Baltimore inspection of grain will continue to be controlled by the Corn and Flour Exchange.

Press Comment.

RETURN OF PROSPERITY.

It appears to be an easy matter to restore prosperity to the farmers of Illinois, after all. The State Board of Agriculture has done it by the stroke of a pen. Last year it was shown by the figures of the State Board that the Illinois corn crop had been produced at a loss. The Board has now revised its figures and they show that the cost of the corn crop per acre is somewhat less than the amount for which it sells. Let us all praise the Lord for this evidence of returning prosperity. If the farmer does not believe it, let him look at the Board's figures.—*Chicago Herald*.

BUCKET-SHOP FAILURES.

"Certain esteemed contemporaries are jubilating over the recent failure of bucket-shop gamblers. They should not forget that the bucket-shop men have not lost anything in the failures. The freight is paid by the customers of the bucket shops when failures occur. The bucket-shop managers are not in the business to lose. No matter how the markets go, they 'make,' and their customers foot the bills. A 'bucket-shop' failure generally means a gain by the owner of the shop. A genuine bucket-shopper can 'fail' every day in the year, Sundays included, and still be 'in' at the end of the year."—*Milling World, Buffalo*.

ARE "RING" TRADES ILLEGITIMATE?

It is just as well to admit that a certain proportion of the transactions on the leading grain exchanges of the country are "rung out" or offset one against the other just as illegitimately as the doctor may offset his claim for professional services against his grocer's monthly bill for provisions, and that it is possible that this class of transactions may constitute a large share of the whole volume of trading. Now, if these gentlemen ring out their trades by paying differences, does it render all the original bona fide transactions illegitimate? As a matter of fact, if some of those who so freely characterize the grain exchanges as merely gambling shops were quite familiar with what goes on there it is possible that their opinions might be changed.—*Bradstreet's*.

FARMERS SHOULD BE REASONABLE.

Why is it that farmers take up with such unreasonable schemes, such, for instance, as building warehouses by the government to store wheat and cotton, and advancing money on same? It looks ridiculous for the government to go into the warehouse business; besides, the very parties asking for these warehouses would soon be howling about the taxes to build them and to pay men to care for them. Let them first stop and candidly think of the matter before rushing to Congress for aid. And Senator Sanford's mortgage scheme is as ridiculous a thing as was ever heard of. Why, the amount of money received would not help raise the mortgages now held, for they could not get the money. There is a reaction going on, and there will be fewer mortgages given in the future.—*National Stockman*.

NOT ALL CRAZY.

The State Farmers' Alliance of Wisconsin declare that they are in favor of collecting the tax on whisky in bonded warehouses and applying it "for the carrying out of the sub-treasury bill demanded by the National Farmers' Alliance." The *Times* is unwilling to believe that the men who favor that sub-treasury scheme fairly represent the farmers of the United States. It prefers to believe that the farmers as a class are too intelligent to seriously favor a scheme which is so utterly impracticable, and which, if it could be carried into effect, would certainly end in the worst financial revulsion and disaster ever experienced by this or any other country. The *Times* does not believe that the farmers of America, from whom have sprung our greatest statesmen, jurists and financiers, have all gone crazy together.—*Chicago Times*.

HAVE RUN MAD.

The members of that remarkable institution, the Farmers' Alliance, seem to have run mad and are attempting to fill the brains of the agricultural community with all kinds of foolish, impracticable ideas among them the establishment of government warehouses for the storage of farm products, and government issues of paper currency direct to the people at a low rate of interest "which shall be legal tender for all debts, public and private." These projects are but the sickly dreams of state socialism; and yet they were gravely promulgated by the president of the "National Farmers' Alliance" in an alleged argument before the Senate Committee on Agriculture. The old greenbackers, with their interchange of irredeemable currency and inconvertible bonds, were wise financiers and political economists compared with the new brood of demagogues that have taken charge of the Farmers' Alliances.—*Colorado Chieftain*.

THE LAW.

Telegraph Messages.

The Indiana statute imposing a penalty upon telegraph companies for failure to transmit and deliver a telegraph message, only applies to contracts made in that state and has no bearing upon a message sent from Illinois.—*Rogers vs. Western Union Telegraph Company, Supreme Court of Indiana, 24 N. W. Rep. 157*.

Breach of Contract—Damages.

Where a party sells grain which the buyer refuses to accept when delivered, the fact that the buyer knew that the seller had a right to resell, as a result of his refusal to carry out his contract is sufficient notice to him of the intention to resell, and the seller will be entitled to recover the damage sustained by the resale.—*Waples vs. Overaker, Supreme Court of Texas, 13 S. W. Rep. 527*.

Failure to Send Telegram.

Where a telegraph company failed to deliver a message, by reason of which the plaintiff was obliged to make a useless trip and the company paid the expense of such trip, but it was not a settlement by way of accord and satisfaction; such payment is not a bar to an action for the statutory penalty imposed by the statutes of Georgia.—*Western Union Telegraph Company vs. Taylor, Supreme Court of Georgia, 11 S. W. Rep. 396*.

Principal and Agent.

Where a person running an elevator, managing it as agent, makes a contract for repairs without specifying his agency to the contractor, who did not know but what he owned the elevator, he is personally liable, and even previous repairs paid for with checks signed by the owner is not notice of agency.—*Kneeland vs. Coatsworth, Supreme Court of New York, 9 N. Y. Supp. 416*.

Right of Common Carriers to Limit their Liability.

A stipulation in a bill of lading that the valuation as agreed upon and named in this shipping receipt, is distinctively understood to be the valuation that shall cover loss or damage from any cause whatever, does not relieve the carrier from liability for the actual value of the goods when their loss is occasioned by its negligence.—*Pennsylvania Ry. Co. vs. Weiller, Supreme Court of Pennsylvania, 19 At. Rep. 702*.

Conversion of Goods by Common Carrier.

Where a common carrier receives goods in good order at their place of destination, properly consigned to the plaintiff, and on demand of delivery of the same, refuses to deliver them. Such facts constitute a conversion of property, as the common carrier is bound to deliver the identical property, received by it in good order at its destination, or pay its full value.—*Clement vs. New York Central & H. R. Ry. Co., Supreme Court of New York, 9 N. Y. Supp. 601*.

Fixtures as Between Buyer and Seller.

A steam engine and boiler situated in a shed attached to a two story building used as a mill, the shed being so constructed that the engine and boiler could not be removed without tearing a part of it down, and a mill attached to the land in the usual way and operated by the engine, are fixtures and pass with the land, unless specially reserved in the deed.—*Horn vs. Smith, Supreme Court of North Carolina, 11 S. E. Rep. 373*.

Breach of Contract by Telegraph Company.

A person made an agreement with a telegraph company to transmit certain news for a certain stipulated price, and to collect all moneys due him, and to render monthly statements of same. The company afterward demanded higher prices which were refused, after which the company failed to make any more monthly statement of collections. This breach of the contract by the company entitled the other party to stop further performance on his part, and to sue for damages.—*Goodsell vs. Western Union Telegraph Company, Superior Court of New York City, 425*.

Failure to Deliver Telegraph Message.

A telegraph company received the following message for transmittal: "My wife is very ill; not expected to live." The cost of sending was paid, and the cost of delivery guaranteed. The company failed to deliver it for twenty-five days. In an action against the telegraph company the sender of the message is entitled to recover for damages, the measure of which shall be the amount paid for the transmission of the message, and in addition what would seem to be just as a compensation for the mental anguish.—*Reese vs. Western Union Tel. Co., Supreme Court of Indiana, 24 N. E. Rep. 163*.

ELEVATOR AND GRAIN NEWS

Minnedosa, Man., is to have a brewery.
A flax mill will be built at Hastings, Minn.
Detroit, Mich., is to have another new brewery.
James Ryan will build a brewery at Ansonia, Conn.
The rice mill at Washington, N. C., is to be enlarged.
Albert Schabel will build a brewery at Meriden, Conn.
The farmers will build a flax mill at Brown City, Mich.
A cotton-seed oil mill will probably be built at Vienna, Ga.
John Walter & Co. will build a brewery at Eau Claire, Wis.
Thomaston, Ga., has prospects of a cotton-seed oil mill.
Two more grain elevators are to be built at Carman, Man.
Rise & Bullen of Chicago, are building a new grain elevator.
Scott Kennedy has built a grain elevator at Charleston, W. Va.
Charles W. Knox, dealer in grain at Oakland, Cal., has sold out.
Catherine Grausch of Philadelphia, Pa., is building a brewery.
New Astoria, Ore., is soon to have several new grain elevators.
A 20,000-ton cotton-seed oil mill is to be built at Couchatta, La.
A cotton-seed oil mill will probably be built at Greenville, Miss.
A brewery is to be built at Wilmington, Del., by John A. Lengel.
The erection of a cotton-seed oil mill is being considered at Seale, Ala.
M. Bion of Owatonna, Minn., will rebuild his brewery lately burned.
William Harrison is enlarging his grain elevator at Killarney, Man.
R. J. Morgan will probably build a grain elevator at Memphis, Tenn.
John G. Rogers of Lowell, Mass., dealer in grain and flour, has sold out.
The Packard Lumber and Grain Company of Creighton, Neb., has sold out.
A. T. Schmid & Co. will build a 50-ton cotton-seed oil mill at Cuero, Tex.
The Manitoba Elevator Company has its headquarters at Wawanesa, Man.
H. A. Hawley, grain and flour merchant at Waltham Mass., has sold out.
Thomas Hanson of Minnetota, Minn., has closed out his grain business there.
Finch & Wall, grain dealers of Nashville, Tenn., have dissolved partnership.
Mark & Worcester, grain dealers at Olio, Mich., have dissolved partnership.
Carl Stofft of Dunseith, N. Dak., will build a new brewery at that place.
Fisher & Taylor, grain dealers of Oakland, Cal., have dissolved partnership.
S. Rosenheimer of Kewaskum, Wis., will rebuild his elevator, lately burned.
W. J. Van Keuren of Chicago will build a 100,000 bushel elevator at once.
Howe & Tisdale are doing a thriving business at their elevator in Wenona, Ill.
N. B. Post & Co. have sold their grain and lumber business at Fonda, Iowa.
J. B. Soper & Co. of Owatonna, Minn., grain dealers, have dissolved partnership.
James & Duchesneau, grain dealers at Montreal, Que., have dissolved partnership.
E. W. Stafford of Urbana, Ohio, will build a broom factory at Little Rock, Ark.
A 100,000-bushel elevator is to be built by Mr. Sleeper of Waco, at Henrietta, Tex.
The brewery of Spencer & Liddell at Pittsburg, Pa., has passed into the hands of a stock company, and will be enlarged and improved. The capital stock is \$300,000.

The capacity of the malthouse will be increased from 20,000 to 100,000 bushels.

Myers & Loving of Washington, D. C., have built a grain elevator and corn mill.

Thomas Shepherd of Platteville, Wis., is doing a good grain business at Elmo, Wis.

The farmers near Eldridge, Iowa, will build a 25,000-bushel elevator to cost \$5,000.

A stock company has been organized to erect a cotton-seed oil mill at Columbus, Ga.

A \$160,000 cotton-seed oil mill is to be located at Manchester, near Fort Worth, Tex.

Streeter & Greenway of Clyde, N. Y., will erect a storage elevator and malt house.

Harvey & Co., of Chicago, intend building a large grain elevator at Cuba City, Wis.

The William Greene Grain and Tobacco Company of Germantown, Ohio, has sold out.

The firm of Sly, Davis & Kobs, dealers in grain at Blue Earth, Minn., has been dissolved.

Gilbert & Kirkpatrick have put an elevator into the grain warehouse at Onslow, Iowa.

The Isaac Harter Company of Fostoria, Ohio, intend building a 5' 0,000-bushel elevator.

A cotton-seed oil mill will probably be built at Dallas, Tex., by a New Orleans company.

Peterson & McRoberts, dealers in grain at Ellsworth, Minn., have dissolved partnership.

The Drewry Brewing and Bottling Company of St. Paul, Minn., has been incorporated.

J. H. Cramer is interested in the establishment of a broom factory at Piedmont, W. Va.

W. W. Robinson and others will erect a \$25,000 cotton-seed oil mill at Alexander City, Ala.

The Tennessee Brewing Company of Memphis, Tenn., will erect an addition to its brewery.

H. P. Downes of South Britain, Conn., has sold his grain and feed business at that place.

Beed & Northey have succeeded Northey & Harrison in the grain business at Hampton, Iowa.

Indianapolis, Ind., has five elevators, with a combined capacity of 1,195,000 bushels of grain.

Barstow & Babbitt, dealers in grain and hay at Oakland, Cal., have dissolved partnership.

A \$15,000 cotton-seed oil mill will probably be built by the Farmers' Alliance at Jefferson, Ga.

The elevator at Saybrook, Ill., has been sold to the Central Elevator Company of Chicago.

The Schulenburg Oil Mill Company of Schulenburg, Tex., has filed articles of incorporation.

The new distillery of Wilson Bros. at Pekin, Ill., will use about 5,000 bushels of grain per day.

L. K. Lee of Valley Spring, S. Dak., has disposed of his grain and milling interests at that place.

A \$150,000 brewery is to be built at Fort Worth, Tex., by J. J. Gannon and others of Dallas, Tex.

The Cumberland Valley Railroad Company intend building a grain elevator at Hagerstown, Md.

The Farmers' Alliance have organized a stock company to build a cotton-seed oil mill at Carrollton, Ga.

Sampson, Ray & Co. have a 20,000-bushel elevator in the course of construction at West Newton, Pa.

It is reported that a stock company has been organized to build a cotton-seed oil mill at Sylacauga, Ala.

The firm of Anderson & Wilde, dealers in grain and lumber at Alexander, Minn., has been dissolved.

Crabbs, Bellman & Co., in the grain commission business at Toledo, Ohio, have dissolved partnership.

A \$30,000 cotton seed oil mill will probably be built by the Farmers' Alliance at Harmony Grove, Ga.

The grain firm of Pressy, Wheeler & Lewis at Minneapolis, Minn., has been succeeded by Lewis & Bill.

The Metzger Lard Oil Company has been incorporated at Chicago with a capital stock of \$100,000.

The Eureka Brewing Company of Wyandotte, Mich., has been incorporated to build and operate a brewery.

The Sandusky Brewing Company of Sandusky, Ohio, has been incorporated with a capital stock of \$50,000.

Scharping & Bro. have succeeded Charles S. Scharping in the grain commission business at Hindsburgh, N. Y.

A. B. Hackman & Co. have been succeeded in the grain business at Philadelphia, Pa., by A. B. Clemmer & Co.

Jones Bros. & Co. will begin the erection of an extensive grain elevator in the near future, at Belleflower, Ill.

The Slaughter Brewery and Malting Company, Seattle, Wash., has been organized with a capital stock of \$5,000.

The Union Improvement and Elevator Company of Duluth, Minn., has filed articles of incorporation. The capital stock is \$500,000, and the limit of stock issued

\$2,000,000. The incorporators and directors are C. H. Graves, M. J. Forbes, T. B. Case and R. M. Newport.

The St. Matthews Oil Mill Company of St. Matthews, S. C., has been organized with a capital stock of \$25,000.

The George Hauck Brewing Company of Kingston, N. Y., has been incorporated with a capital stock of \$30,000.

The Walkerville Brewing Company of Walkerville, Ont., has been incorporated with a capital stock of \$95,000.

The Central Exchange of Chicago, has been incorporated to buy and sell grain. The capital stock is \$1,000,000.

B. A. Ludlow and others have organized a \$65,000 stock company to erect a cotton-seed oil mill at Belton, Tex.

The Bonham Electric Light and Power Company of Bonham, Tex., will, it is stated, build a cotton-seed oil mill.

Albert P. Headbloom has sold his half interest in the grain business of Samuelson & Headbloom at Stromburg, Neb.

The Ogilvie Milling Company have commenced the erection of a large annex to their elevator at Winnipeg, Man.

The W. B. Rogers Elevator Company at Chicago have changed their name to the Columbian Elevator Company.

W. P. Russell of Yorkville, S. C., has purchased the buildings of the Charleston Rice Milling Company for \$8,500.

The George Wiedemann Brewing Company of Newport, Ky., has been incorporated with a capital stock of \$500,000.

The Northern Central Railway Company of Baltimore, Md., has let the contract for an elevator near Calvert Station, Md.

The American Linseed and Castor Oil Company of East St. Louis, Ill., has been incorporated with a capital stock of \$45,000.

The Black River Starch Company of Black River Falls, Wis., has filed articles of incorporation, with a capital stock of \$15,000.

Oil mills will be erected at Racine Junction and Western Union Junction, Wis., by Chicago parties, at a cost of \$75,000 for each plant.

The Farmers' Alliance of Unadilla, Neb., has appointed a special agent to look after their grain shipping interests at that point.

The Orangeburg Oil Mill Company has been incorporated at Orangeburg, S. C., by P. S. Felder, B. F. Muckenfuss and T. M. Rayson.

Articles of incorporation have been filed by the Monroe-Eckstein Brewing Company of Middletown, N. Y. The capital stock is \$300,000.

Two distilleries are soon to be built by the anti-trust distillers, the joint capacity of which will be about 20,000 bushels of grain per day.

Bartholomae & Roesing Brewing and Malting Company of Chicago have filed articles of incorporation with a capital stock of \$1,000,000.

The old elevator and mills at Athens, Ga., have been purchased by a stock company, and will be overhauled and put into operation at once.

The Farmers' and Laborers' Union have, it is reported, organized a \$20,000 stock company to build a grain elevator and mill at Olmstead, Ky.

R. F. Lyons of Carberry, Man., has overhauled his elevator and increased the capacity to 65,000 bushels. The repairs will cost about \$5,500.

L. H. Fairchild of New Orleans, La., has sold an interest in his grain business at that place, and the style of the firm is now Fairchild & McElroy.

Samuel Austin, owner of the grain elevator at Ramsey, Ill., has made an assignment. He has been in business since 1878, and claimed \$8,000 capital.

The Chicago Board of Trade has made the Northwestern Elevator "not regular" for the storage of grain, at the request of the owners of the elevator.

At Denver, Colo., the Milwaukee Brewing Company will build a new brewery. The Union Brewing Company will also build one at the same place.

Manifold Bros. of Washington, Pa., have leased the Jordan elevator at Fairfield, Iowa, and purpose shipping grain direct to their establishment at Washington, Pa.

The New Orleans Brewing Association of New Orleans, La., has been incorporated, with a capital stock of \$1,500,000, to construct, purchase and operate breweries.

The bucket shop run by J. W. Helms, known as the "Danville Board of Trade" of Danville, Ill., is closed, to the sorrow of speculators who had large profits coming to them on account of the late advance in grain. It was learned that Helms, who had been on the wrong side of the market, had gone to Spokane Falls, Wash. This concern was a branch of the bucket shop of J. A. Murphy &

Co. of Chicago, who to balance the accounts have attached the profits coming to Helms' customers.

The Pacific Elevator Company took in 76,000 bushels of grain at its Dayton, Wash., elevator during the past season. All but about 2,000 bushels of this was first quality.

The following firms will enlarge their breweries: Jos. Hensler Brewing Company of Newark, N. J.; John G. Schemm, Saginaw City, Mich.; Konrad Schrier, Sheboygan, Wis., and Joseph Stoeckle, Wilmington, Del.

At a meeting held at Grand Forks, N. Dak., May 29, by the Farmers' Anti-Monopoly Association, it was decided to build warehouses at railroad stations, when a sufficient number of farmers would join the association.

Edson Gregg, grain dealer at St. Joseph, Mo., has failed, with liabilities reported at \$50,000, the result of heavy purchases of corn for July delivery. He operated fifteen elevators on the St. Joseph & Grand Island Railroad and the Chicago, Kansas & Nebraska Railroad in Kansas and Nebraska.

New breweries will be built at Hudson, N. Y., by Granger & Gregg Brewing Company; Syracuse, N. Y., by the Greenway Brewing Company; Brooklyn, N. Y., by the Fred Hower Brewing Company; Lockport, N. Y., by the Niagara Ale Brewing Company, and at Brooklyn, by the Paul Weidmann Company.

The Lake Superior Elevator Company of Duluth, Minn., has filed an amendment to its articles of incorporation, increasing the limit of its indebtedness from \$500,000 to \$1,500,000. The object of increasing this is to acquire a system of country elevators in North Dakota which shall act as a feeder to the Duluth system.

George T. Gambrill and others of Baltimore, Md., have brought suit against George Heitz of Vincennes, Ind., to recover \$1,100. Gambrill & Co. have a commission house, and charge that Heitz bought grain of them to that amount, afterward refusing to pay for it. They claim it was a legitimate purchase, while Heitz alleges it was a gambling transaction.

Charles Randolph, the ex-secretary and ex-president of the Chicago Board of Trade, who disappeared from his home April 23, has been found in Portland, Ore. He had been sick, and he says the circumstances of his leaving were all blank to him. He intends staying at Portland for a few weeks to regain his health. Mr. Randolph is sixty-two years of age.

The Menasha Wood Split Pulley Company of Menasha, Wis., have received orders for their hickory pulleys from the following firms: C. T. Miller, Mansfield, Ohio; Geo. H. Strong, Richland Center, Wis.; Logeman & Geisler, Milwaukee, Wis.; Hicks-Brown Company, Mansfield, O.; S. H. Bruett, Summit Lake, Wis., and the Cyclone Company, Indianapolis, Ind.

Clark Woodman is about to erect in Omaha a grain elevator of 1,000,000 bushels' capacity. Its total cost, including the ground and machinery, will reach \$200,000. Seely, Son & Co. of Fremont, Neb., elevator builders, have the contract. Mr. Woodman builds and operates this elevator as his own individual concern. It will be larger than any elevator in Omaha.

The Sibley Elevator Company of Chicago, has petitioned the court to be allowed to go out of business of conducting warehouses of Class A without prejudice to its entering the business again if it so desires. It was ordered that the Warehouse and Railroad Commissioners be given notice in order that objections made be made to the granting of the petition if any exist.

W. S. Smith, superintendent of the glucose works of the Firmich Manufacturing Company at Marshalltown, Iowa, on trial at Toledo for keeping a nuisance, has been found guilty. The complaint was that the Iowa River was so polluted by the waste from the glucose factory that it killed all the fish in the river and bred disease. The verdict may close the factory, which is the largest in Iowa, employing over 300 men.

At a recent meeting of the Farmers' Alliance of Burr, Neb., the following resolution was adopted: Whereas, Past experience has proven that we, the farmers surrounding Burr, Neb., have received less for our grain than was paid in surrounding towns, therefore be it Resolved, That we, the Farmers' Alliance of Burr, Neb., will hereafter do our own shipping if another elevator is not opened and operated within thirty days of the date of this resolution.

The Nebraska Land and Improvement Company of Milwaukee, Wis., has filed articles of incorporation at Lincoln, Neb. The filing is made under the law allowing foreign corporations to become domesticated in this manner. The object of the new corporation is to be the building and leasing of warehouses, elevators, machinery and shops. The capital stock is \$100,000, and the incorporators are George Hiles, C. O. Baker, C. W. Briggs, James Hiles, H. C. Cook and B. Skidmore.

Two large linseed oil manufacturing plants are in process of construction in Chicago. One is being built by H. H. Getty, C. F. Hils and James Wright, to cost \$275,000; capacity 1,000,000 bushels a year. The second, having a capacity of 500,000 bushels annually, is being built at the intersection of the Wisconsin Central and Chicago, Burlington & Quincy tracks, by the Metzger Linseed Oil Company. The trust mills in the West have a combined capacity of 8,000,000 bushels. The new establishments will be running this fall.

Fires, Casualties, Etc.

Peter Vander Willigen of the grain firm of Osborne Bros. of New York City, is dead.

J. W. Hanes of Enon Station, Ohio, is dead. He was in the grain and lumber business at that place.

The brewery of Kleiber & Bothe of Reading, Ohio, was destroyed by fire May 30. The loss is \$75,000.

The property of Mary F. Nixon, dealer in grain, lumber, etc., at Veedersburgh, Ind., has been destroyed by fire.

The elevator and mill of Isaac Myers at Lacoma, Iowa, burned May 22, together with about 25,000 bushels of corn.

The grain elevator of Hodgins & Hutchins at Lucan, Ont., containing a large quantity of oats, collapsed recently.

The M. S. Pettit Malting Company's malt house at Kenosha, Wis., was damaged \$12,000 to \$15,000 by fire on May 25.

The grain elevator at Woodstock, Iowa, owned by C. P. Gormley & Co., burned May 26. The loss was \$30,000; fully insured.

George P. Williar, senior member of the firm George P. Williar & Son, grain and flour merchants at Baltimore, Md., is dead.

The Banner Brewing Company of Cincinnati, Ohio, sustained a loss of \$40,000 by fire May 27. The loss was covered by insurance.

The grain warehouse and general store of W. E. Hicks & Co. at Olivet, Kan., have been destroyed by fire. The insurance will cover the loss.

The Smart Grain Elevator and the depot at Plattville, Wis., were struck by lightning June 2, and totally destroyed. The loss is \$15,000.

A line of corn cribs containing about 100,000 bushels of corn at Weston, Iowa, was submerged by the recent storm in that vicinity. The corn was all lost.

The grain elevator of Delahay Bros. at Cobden, Ont., burst May 18, scattering 8,000 bushels of peas on the ground. The heavy timbers were split into kindling wood.

The grain elevator of Searing & Messler at Chatsworth, Ill., caught fire during the conflagration at that place June 8, and was saved from total destruction after a great effort.

During a heavy storm on May 31 the residence of G. E. Smith, the prominent grain dealer of Cedar Springs, Ont., was struck by lightning, causing considerable damage. The loss is covered by insurance.

Burglars entered the elevator office of John Bryan at Elgin, Minn., May 24, and stole \$150 in cash and a large number of notes. The door of the safe was blown through the side of the building.

On Monday, June 2, a young son of John Smith, a grain dealer of Roberts, Ill., was the victim of a horrible accident. While crawling under a tumbling rod in the elevator his clothes caught and he was pounded to death.

Samuel Chase, the 10-year old boy of Nathaniel Chase of Clay Center, Kan., fell into the hopper through which corn was being discharged at French's Elevator, on May 17. He was drawn down and smothered before help reached him.

The grain elevators of Wirtz Bros., W. W. Klock and of Joseph Tye of Bradshaw, Neb., were unroofed and otherwise damaged by the cyclone that swept over that town on the night of June 3. The total loss of the three firms will amount to about \$3,500.

The new grain elevator of the Kentucky Central Railroad Company, just completed at West Memphis, Tenn., at a cost of \$40,000, was totally destroyed by fire June 9. The origin of the fire is unknown. C. G. Adams, the contractor, who was 75 years of age, slept in the building, and is thought to have perished in the flames. The total loss is \$75,000.

Simon Gorman and Timothy Lynch were smothered to death June 3 in the Danville Elevator at Bridgeport, Ill., owned by W. P. Harvey & Co. They were shoveling grain into the bins when a partition gave way, burying them beneath 80,000 pounds of grain. A large number of workmen hastened to dig them out, but they were both dead when found.

The death is announced of Mr. John M. Boalt, who was at one time prominently connected with the grain trade of Winona and Southern Minnesota, and who was well known throughout the state of Ohio. Mr. Boalt died on May 4, at Sandusky, Ohio. He was born in Norwalk, Conn., in 1814, but with his parents removed to Ohio. On arriving at maturity Mr. Boalt engaged in business in that city, where he remained until early in the 50's, when he removed to Milwaukee, becoming a partner there with Angus Smith in the grain and commission trade. About 1861 he went to Winona, where he was a large operator in

grain along the line of the Winona & St. Peter Railway. In 1866 he sold out his interests in Winona and returned to Sandusky. Though self-educated, he was a man of remarkable intelligence, firm as a rock in his convictions, yet charitable of others in all things save in what he regarded as wrong.

The large elevator and mill of the Winona Milling Company at Winona, Minn., were destroyed by fire on the morning of May 15. The elevator contained about 25,000 bushels of wheat, which was consumed. The elevator and machinery were valued at \$35,000. The storage capacity was 235,000 bushels. The total loss is estimated at \$305,000; insurance \$203,000.

The death is announced of J. M. Irvin of Apple River, Ill. Mr. Irvin at one time did a large and profitable grain business, in partnership with his brother, Robert Irvin, at Apple River, where he located in 1853. He was the oldest resident of that place and the first one to enter into business there. He leaves a wife and one son. He had a host of friends, who deeply regret his death.

The Minnesota and Dakota Elevator at Litchfield, Minn., was burned June 3. The fire originated in the cupola from a lantern explosion. By hard work the fire was confined to the burned building, although several others were at times on fire. The elevator contained between 1,500 and 2,000 bushels of wheat. Loss \$5,000. The building was one of the old landmarks of the place, being the first elevator erected there.

ITEMS FROM ABROAD

The crop reports from France continue very satisfactory.

The French Government has imposed a duty of three francs on maize.

The present indications for a good crop in Southern Russia are bright.

Advices from India say the export of wheat from that country this year will hardly reach half the quantity of its best recent year.

The Russian Government has decided to advance very materially the duties on agricultural implements and other foreign manufactures.

A scarcity of home-grown wheat is expected in England this season. In the northern and eastern districts it is said that enormous damage has been done by mice and rats.

It is stated that the out turn of flax in India will be more satisfactory than that of wheat. The yield per acre is much smaller, the average crop of flax being estimated at about 240 pounds to the acre.

According to a statement of the Secretary of State, Austria, Hungary, Belgium, France, Germany, Turkey, Italy, Portugal, Spain, Switzerland, Sweden, Argentine Republic, Brazil, Canada, and Mexico impose a duty on American breadstuffs and provisions.

An explosion of "malt dust" occurred at Reid's brewery, Clerkenwell Road, London, E. C., recently. The mill room and contents were damaged by the explosion, and Edward Collier, aged thirty-five years, was badly burned on the face and hands.

The reports of the Hungarian Minister state that the wheat on the left bank of the Danube has suffered from excessive rains and that rust has begun to show itself from the right bank of the Danube and other districts, the crops of wheat, barley and rye are excellent and promise well.

A decision of some importance to those engaged in the foreign grain trade was given by Sheriff Guthrie in the Glasgow Sheriff Court, recently. Some time ago an action was raised by Messrs. Pickford and others, ship owners, Newport, against Mr. William Johnstone, corn merchant, Glasgow, for payment of a balance of freight of £200, which had been consigned under a joint arrangement between the parties pending the settlement of a counter claim by the defender for damage to cargo. The cargo (Chilian barley) was carried by the defender's sailing ship from Valparaiso to Glasgow, and was loaded in bags, but the captain had opened and "bled" a number of the bags, thereby allowing the cargo to get loose in the hold, and so become injured through admixture with damaged grain. Sheriff Guthrie has issued an interlocutor in which he assizes the defender from the conclusions of the summons, finds that the captain was not entitled, either in terms of the bills of lading or by custom, to empty or "bleed" the bags, and that the defender has suffered loss to an amount exceeding the balance of the freight sued for. The defender is also entitled to expenses.—*North British Agriculturist*.

A bucket shop in St. Paul has gone out of business, and the manager has gone to Canada. The list of "lamps" whose fleeces this manager carried away is said to be "as long as the moral law," which illustrates that there is no honor among thieves.—*Western Stockman*.

WATERWAYS

The report of the receiver of the Chesapeake and Ohio Canal Company declares that the waterway must be abandoned.

A serious break occurred in the Erie Canal at Whitesboro, May 25, causing the delay of many boats and a loss to boatmen.

The Erie Canal tonnage for the first week of navigation this year was 232,415 tons, as against 160,000 for the same time last year.

The America took a big cargo of oats from Duluth to Buffalo recently, the load being 154,000 bushels, the largest ever transported between these two points.

It has been decided to close the Welland and St. Lawrence canals from 6 A. M. to 9 P. M. on Sundays, to allow the crews and passengers to attend divine service.

Recent advices from Kingston, Ont., state that the steamer Haggart arrived from Perth with 1,500 bushels of rye and a lot of merchandise. This is the first cargo that has arrived from the basin of the new Tay Canal, which runs into Perth.

The Erie Ship Canal corps, which is making a survey of the proposed waterway between the Ohio River and Lake Erie, reached Sharon, Pa., May 29. A complete survey of Shenango Valley route to this point makes it apparent that it is much the shorter route of any yet proposed.

It seems very probable that money will be appropriated by the present Congress for commencing work on the Hennepin Canal. The friends of the canal have been working hard. The opposition is weak. If built it will cause a reduction in grain rates from Mississippi River points to Chicago.

The Ogdensburg Transit Company now makes a practice of giving their boats full cargoes eastbound and lightening sufficient grain at Port Colborne to enable them to pass through the Welland Canal on fourteen feet draft. This grain is then transferred by the Welland Railroad to Port Dalhousie and placed in an elevator in readiness to be reloaded into the boat on arrival at Port Dalhousie. The grain so transferred is not obliged to pay canal tolls.

One hundred and eighty-five boats left Buffalo on the day of the opening of the Erie Canal, carrying 1,540,000 bushels of grain. Let some one who believes the canals are played out, figure how many ordinary freight trains would have been required to freight this grain, or what the cost of transportation by rail would have been but for the competition of the canals. They are a check upon railroads that the country cannot afford to get along without.

The government has not decided to build the Niagara Ship Canal. Two routes are proposed. The Olcott, or Eighteen Mile Creek route, contemplates a canal with a length of 25.23 miles, and eighteen lifts, at an estimated cost of \$23,617,900. The Wilson, or Twelve Mile Creek route, is on a scale of 18.35 miles, eighteen lifts, and an estimated cost, with single locks, of \$24,201,550, and with double locks, \$29,347,900. The expressed preference seems to be for the Olcott route.

So far this season the grain shipments from Duluth have been about 6,000,000 bushels. This is a record to make Chicago wild, and it has all been made with less than four weeks of navigation, and without the aid of a large grain fleet wintering at Duluth. There have been many noteworthy features of these shipments, such as the rapid trips made by the grain carriers and quick dispatch at the elevators. The feat attempted by the Northern line of putting a cargo of oats into warehouse at New York City, in six days from the time it was loaded, is especially marked. The reputation that the Duluth route is earning must certainly bring coarse grain to that point in larger and larger quantities.—*Winona Republican*, May 30.

The Canadian Government is sparing neither money nor skill to make the most of the advantages which nature has already given her in connection with the great lakes. She has made surveys and estimates for an almost direct line of waterways from the Sault Ste. Marie and from Lake Michigan to Montreal, through Lake Nipissing and the Ottawa River. Such a canal, if practical, would make the distance by it the same to Montreal from Lake Superior as by the present lake route from Lake Superior to Buffalo. Montreal is now practically a seaport, and with a 27½ to 39-foot channel for seagoing steamers, which has been made at a cost of about \$2,200,000, the voyage therefrom to Liverpool is 315 miles less than from New York.

In a recent interview an old member of the New York grain trade said: "I remember that in the fall of 1852 we paid 29 cents on a boatload of wheat from Buffalo to Albany, or equal to \$2,300 on a boatload of to day, or 8,000 bushels, which is now brought from Buffalo to New York for \$300, or 3½ cents per bushel. Now there are no tolls, but about 5 cents then. This is one reason seaboard prices have been reduced so much in the last thirty years. Freight now from Dakota are less than they used to be from Buffalo to New York." He also said that he had known

a canalboat to pay for itself in those times in two trips from Buffalo to New York, and a lake grain vessel to pay for itself in one season. Now they can scarcely get the cost of running them at the rate now current.

If the proposed canal around Niagara Falls is built our vessels will avoid the Canadian rebate system which now operates against them on the Welland Canal. By it the largest vessels can place their cargoes at Oswego twenty hours after passing Buffalo. There their cargoes can be transferred to canal boats at a point 145 miles nearer New York than Buffalo, and have 168 miles less of canal to traverse to reach the Hudson. The average of many trips to the Hudson, of steam canal boats with consort, shows six days from Buffalo, against four days from Oswego. This would make a clear saving of one and one-fifth days, or 20 per cent. of the time of the present trip from Buffalo. Having two independent and competing water routes available to shippers would perhaps reduce the present elevator charges at Buffalo.—*Duluth News*.

The Baltimore *Sun* announces that a company of French capitalists are to undertake the construction of the Maryland and Delaware Ship Canal on what is called the Sassafras route, beginning at the mouth of the Sassafras River, 39½ miles above Baltimore, on the Chesapeake Bay, following the course of the Sassafras 16½ miles to the head of tidewater, and then striking across to the Delaware Bay at Liston's Point, a distance of 14½ miles. The heavy excavation on this route would only extend 7½ miles, and the cost of the work is estimated at \$8,000,000. This amount of money has been subscribed by the company organized, which has secured the control of the state charter and stock of the original projectors of the canal, who asked for federal help in their enterprise but failed to secure it. Such a canal would be of great advantage to the city of Baltimore, shortening the water route to Northern ports at least 200 miles, and also materially shortening the route to Europe.

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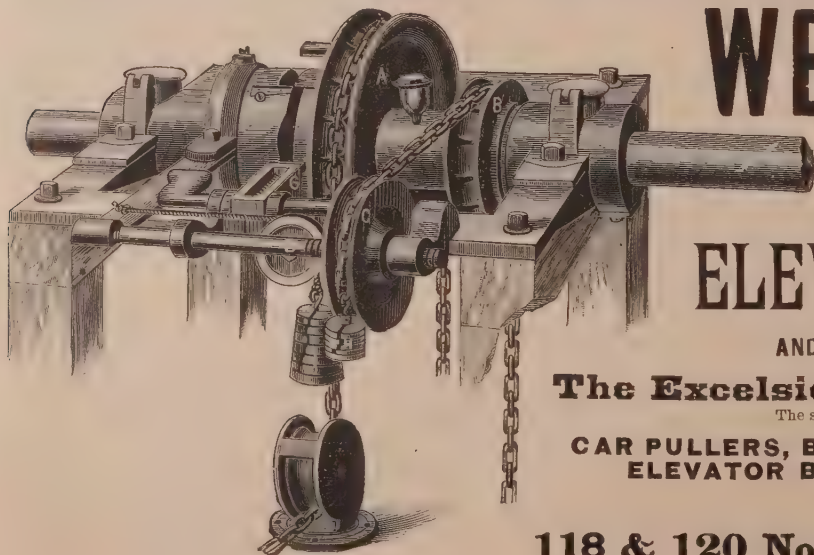
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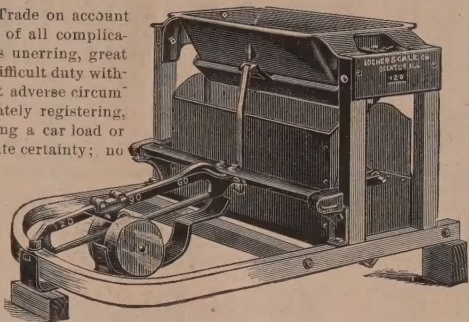
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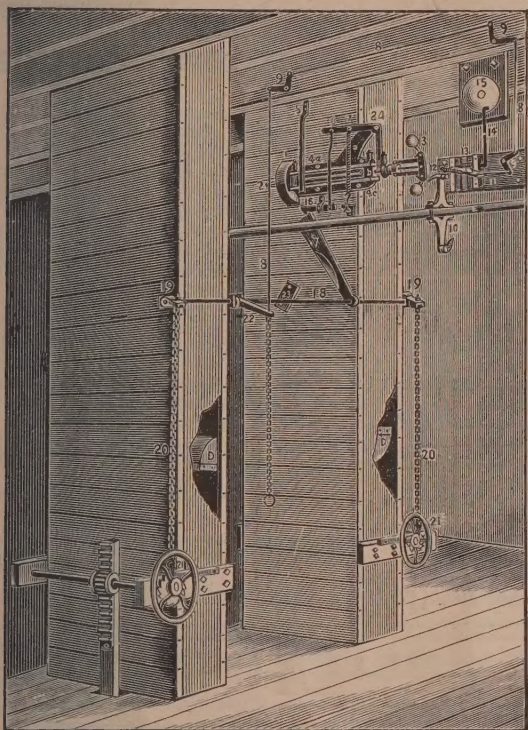
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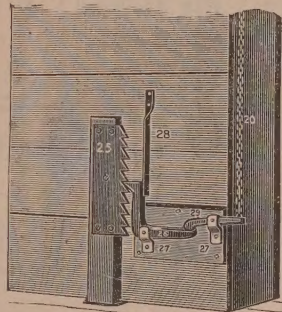
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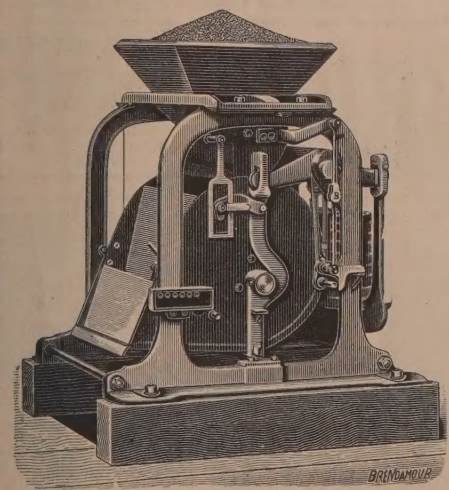
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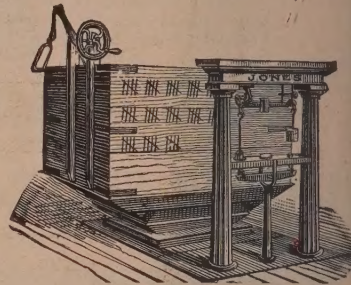
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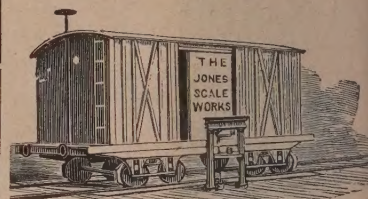
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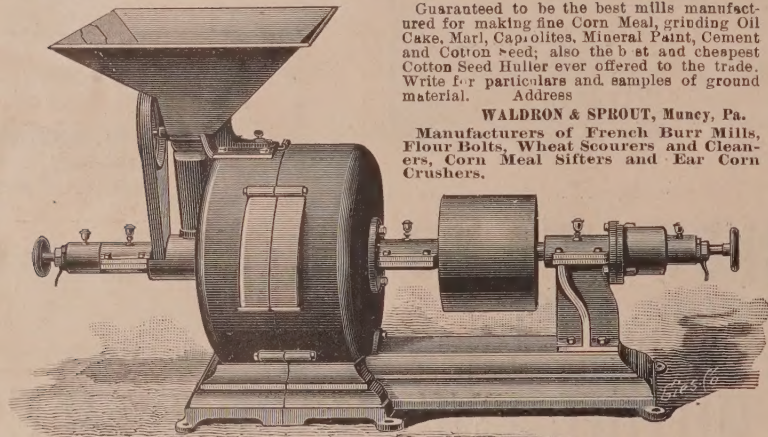
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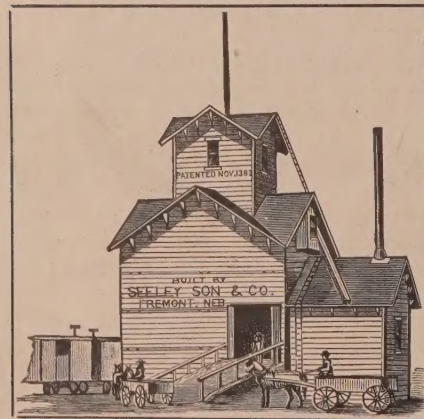
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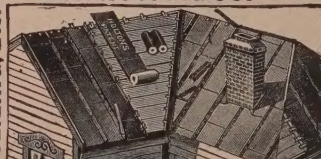
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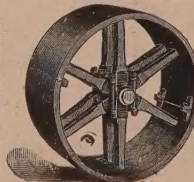
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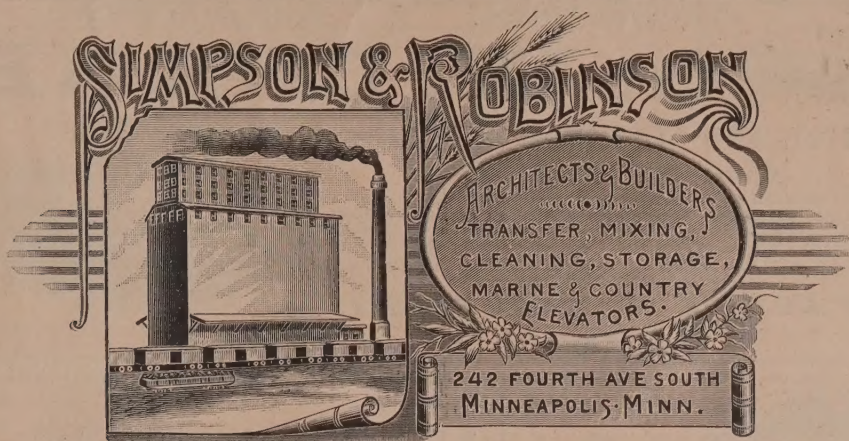
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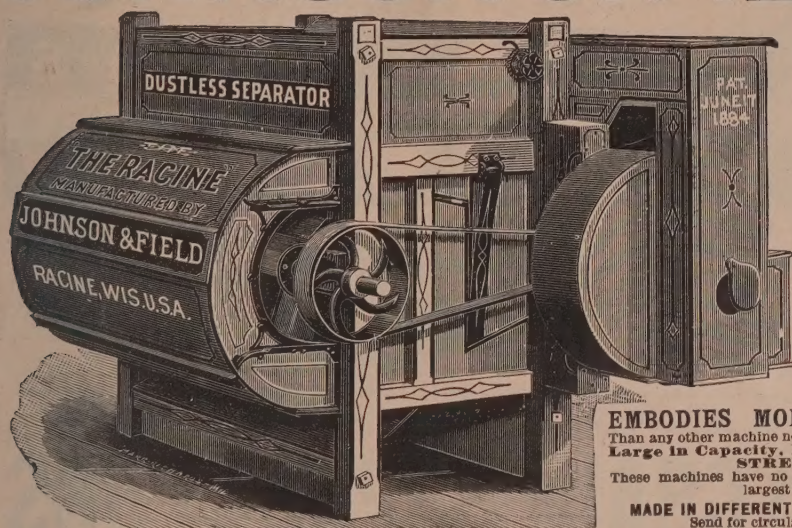
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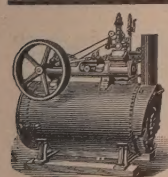
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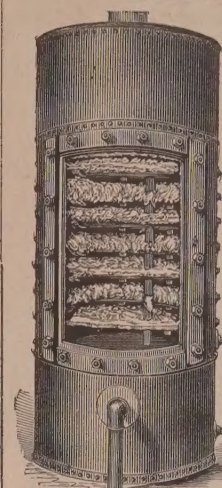

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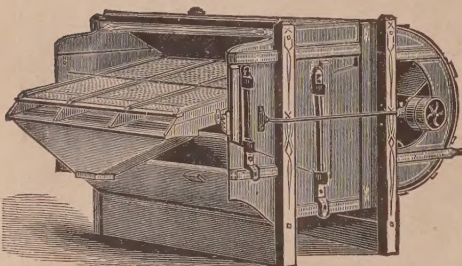


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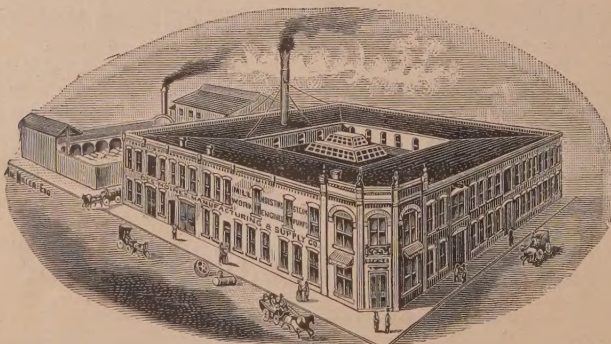
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